

INSTRUCTIONS
IN
GYMNASTICS

BY
NAHL BROTHERS.

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INSTRUCTIONS



Gymnastics

ARTHUR AND CHARLES NAHL:

Illustrated with Fifty-Three Plates,

CONTAINING

SEVERAL HUNDRED FIGURES,

DESIGNED AND ENGRAVED BY THE AUTHORS,

Representing the various Exercises on the Ground, the Vaulting Horse,
Parallel Bars, Horizontal Bars, Rings, Etc., including Con-
struction of Pyramids, Plans of Apparatus, Etc.

San Francisco:

PUBLISHED BY A. ROSENFELD,

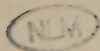
1863.

D E D I C A T E D

TO THE

“San Francisco Olympic Club.”

TOWNE & BACON, PRINTERS,
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PREFACE.



THE development of the strength of the human body brings with it so many advantages, that it should never be neglected. Unfortunately, many persons think that if they improve and strengthen their minds, the body of itself will attain its natural strength. This, however, is not the case. We all know, or should know, that the mental faculties of man require more or less cultivation to develop them; why, then, should we not use the same care as regards the body, in trying to improve it in physical strength?

Gymnastic Exercises should be practiced from childhood; but those who have neglected so to do should not fail to atone for such neglect by practicing such exercises at every suitable opportunity in the future. Health requires it. It has been proved that persons of advanced age and declining health have, by regular courses of gymnastic exercises, regained much of the vigor and freshness of youth. It may be that persons unaccustomed to such training will find the fatigue rather unpleasant at first, but this should not deter them from continuing the exercise with energy and perseverance. Compare the men who have had the advantage of Gymnastics with those who have had no opportunity to develop their physical energies, and it will be found that the former not only surpass the latter in activity, strength, and health of body, but also in vigor of mind. The carriage, also, of one accustomed to regular gymnastic exercises is much superior in that lightness and grace which all admire, to that of one who takes no exercise whatever. How often in the course of life are we exposed to accidents of various kinds? A slow moving, weak man would, under such circumstances, perish; while, on the other hand, he who is accustomed to gymnastic exercises, and has acquired by them strength and activity, is not only able to help himself, but also to rescue others from perilous situations. We have numerous instances of persons losing their lives merely for the want of bodily strength and elasticity.

In Europe, the practice of Gymnastics is regarded as an indispensable part of education, and schools for that purpose are found in almost every place. They have even gone so far as to introduce them into the military and fire departments, both of which are obliged to devote a certain time regularly to this branch. It is highly important that parents should train their children from

early childhood to suitable bodily exercises, or send them *where* such benefits can be received. For such schools, none but competent teachers ought to be employed, because the delicate body of the child may be easily injured by not using proper precaution. For this reason each family should have in their library a book treating upon the subject, and which would give the rules of exercises in all the various branches. As most of the works hitherto published on this subject have not been sufficiently clear and explanatory for those who know nothing about gymnastic exercises, it is our intention to place before the public a properly arranged volume on Gymnastics, so that it may be understood *by everybody*.

Our book will be so constructed as to give the scholar, or such person as may feel inclined to instruct himself, a full and perfect idea of the subject.

The Illustrations will be one of the principal features, it being acknowledged that a correct drawing will give better satisfaction than a lengthy, incomprehensible description. A simple glance at the Illustrations in it sufficiently explains the manner in which the exercises should be practiced. The letters show the different positions, and how they follow one after the other, and the arrows indicate the directions in which the body moves in attaining the different positions. Besides which, correct explanations and the name of the particular exercise, in German as well as English, will elsewhere be found.

A. N.

GENERAL RULES AND REGULATIONS.

THE various exercises are divided into the following branches :

1st. "Gymnastics on the Ground," or "Free Exercises." These, however, can be practiced, as well in rooms as in the open air—no implements or apparatus of any kind being required. The open air, however, possesses obvious advantages over a close room.

2d. Exercises in which movable apparatus is used, such as lifting weights, swinging clubs, leaping with a pole, fencing, boxing, etc., etc.

3d. Exercises on fixed apparatus, fastened either to the ground, wall, or ceiling. To this division belong most of the instruments, as well as the different bars, rings, vaulting horse, trapeze, climbing poles, ladders, ropes, etc.

4th. Exercises requiring an extended space of ground, and which cannot be practiced to advantage in rooms, such as running, leaping, drilling, riding, wrestling, etc., etc.

Gymnasiums in the open air are far more preferable than rooms and halls, where at times (especially in the summer season) damp air prevails, and where too much ventilation causes a draught, which is very injurious to health, and where the body is much more disposed to perspire, than in the open air. Gymnasiums should be located in wind-calm places, and the ground should be even and covered with something soft, such as tanners' bark, etc. Particular care should be taken while practicing in rooms, to spread something soft on the floor, to avoid accident. After exercise care should likewise be taken to change the apparel from next the skin.

We would especially recommend to teachers of gymnastics and leaders of the same, to adhere strictly to the rule of dividing their classes equally, according to strength and ability, and in all cases retain the gradation of the exercises in the regular order as they may follow each other. Pupils should likewise be classed according to their expertness. These classes should not consist of more than ten pupils, and each class should have its separate leader. Teachers should be particular to have their scholars conform to the rules and regulations. The leaders of the different classes should be selected by the teacher from the best pupils of the highest rank. No difficult exercises should be attempted until the easier ones are performed with ease and safety. Pupils should by all means avoid bad habits, such as making grimaces, stretching out the tongue, puffing the cheeks, and other contortions of the body. No exercises should be indulged in until at least two hours after meals, in order that the process of

digestion may not be interrupted. Beginners should not exercise beyond their strength. Should they feel stiffness in the shoulders, or other inconvenience, it would be well to cease the practice for a few days, in order that the body may recover its full strength. It would be better, however, to commence so moderately that *no soreness* will be felt. As each of the numerous exercises is intended to develop certain muscles, no predilection should be entertained for any particular branch. It is absolutely necessary that the exercises should follow each other in regular order, and it is *not* expected that all of the exercises mentioned will be performed at the start, but the various movements described should be tried in rotation, in order that the whole body may be strengthened. The rules we have mentioned are general in their character, because they are applicable to all exercises and instruments. The rules following are special in their character, applying only to the exercises to which they refer.

SPECIAL RULES AND REGULATIONS.

FREE Exercises on the Ground are generally practiced first. These can be performed by several parties at the same time, and are intended to prepare the body of the pupil for after and more difficult lessons. They, however, should not only be practiced by beginners but by good gymnasts.

At the command of the leader, "Fall in," the pupils should form in line, thus: Feet close together, the body erect, chest out, hands on hips, thumbs bent backwards.

At the command, "Half Distance!" the first in line remains standing, while the others step aside, touching each other's shoulder with the extended right hand. (See Pl. 4, Fig. 26, *a* and *b*.)

At the command, "Whole Distance!" the first of the line, who is left standing alone as above described, extends his left arm sideways, and the others step aside until they touch with their extended hands the points of the fingers of each other. (See Pl. 4, Fig. 26, *c* and *d*.) The distance of the pupils will be regulated by the exercises which the leader intends to practice.

What are termed "Free Exercises," are mostly intended to strengthen the legs, and give flexibility to the hips and back. Exercises requiring the greatest exertion are the most strengthening. The bending of the back should be practiced with the greatest care, in order to avoid accidents. Dislocation sometimes occurs in the practice of this exercise. Free exercises cannot be too highly recommended; they are indispensable to every gymnast, and greatly assist at exercises upon fixed instruments. Exercises of this kind would be found beneficial just before going to bed.

Lifting and Carrying,

Should not be commenced too early in the course. The weight should be light at the beginning, and be increased with the increase of the strength. Dumb-bells, sand-bags, and other heavy weights which are easily held in the hands, are used in this exercise. The lifting with the shoulders the sand-bags* are the best. For ordinary exercises for beginners of the first degree—that is, children—the weights should not exceed ten pounds; for youths not over thirty pounds; and for adults not over fifty pounds. The lifting of weights contributes greatly to the strengthening of the arms and upper part of the body, but should be practiced with care to avoid injurious results to the abdomen. A heavy weight should not be lifted while standing with the legs wide apart. While lifting, the breath should be held until the weight is up. Children should observe great caution in performing this exercise, and should never be permitted to attempt it without the supervision of an adult.

* A solidly-made leather or sail-cloth bag, with strong leather handles. The inside must be rubbed with wax or pitch before the sand is put in.

Swinging the Clubs.

This exercise originated with the East-Indians, who practiced it in plays and festivities. The clubs were afterwards used by the English, and at the present day are considered a favorite and indispensable exercise in every well-regulated gymnasium. For ordinary swinging, the club need not weigh over twelve pounds, but it is better to increase the weight with the increase of strength.

Fencing and Sparring.

The exercise of fencing strengthens the arms and wrists, and promotes the expansion of the chest. Like all other exercises, it should be practiced "right and left." To avoid accidents, strong wire masks should be worn on the face, and well padded gloves on the hands. Pupils should be quiet, calm, and firm, in fencing, as well as in sparring; which latter exercise, notwithstanding the prejudice existing against it, is calculated to arouse in persons a greater degree of energy and presence of mind than they might otherwise possess. It makes the limbs flexible and strong, and gives motion and activity to every part of the body: sparring has, also, a good influence upon the mind. Boxing gloves, prepared for practicing, should be stuffed with horse-hair. The science of fencing and sparring is difficult to learn without the instruction of an experienced teacher.

Running.

If executed with ease, is one of the most wholesome and strengthening exercises for the chest, lungs, and legs. While running, the breast must be distended and the upper part of the body inclined forward. The hands should be closed and raised to a level with the hips, the elbows to the rear. Only the toes and forepart of the feet should touch the ground. The mouth should remain closed, and the respirations take place slowly and regularly through the nose.

This exercise should be commenced in a hall; if practiced in the open air, only cool, calm days should be selected; the pupil should, also, run with the wind. The exercise should not be indulged in too long at a time, but as often as possible. When feeling overheated the pupil should gradually change the run to a walk, and should not, while in this condition, stand still or lie down but move about while the blood is cooling down to natural heat.

Leaping and Hopping.

This exercise cannot be too highly recommended, as it assists not only in strengthening the lower limbs but also in developing the body; it serves, also, to give the body elasticity and a good attitude in walking. Leaping signifies, in general, a sudden moving upward, with elastic impulse, over an obstacle by means of a run, or otherwise as the case may be. The run is performed on the toes or "balls" of the feet. It should be begun with moderate steps, which are made quicker as the jumper comes nearer to the point of leaping. Children should observe great caution in leaping from elevations. New beginners should use the leaping-board (see explanation of the apparatus, last plate in the book, Fig. 5) in order to find the right starting point.

Hopping is a continued jumping up. It can be practiced in all directions, standing erect or sitting, on both or one foot, and with or without weights. The term "hopping" usually applies to jumping with one foot only—we apply it differently here, however.

Leaping with a Pole.

This is one of the finest but at the same time most difficult exercises, in which the attitude and movements of the pupils must be closely observed, as the slightest deviation from the rules renders it more difficult and dangerous. The leaping pole should be made of straight hickory wood, and eight or ten feet long. The upper end must be rounded and the lower end pointed and shod with iron or similar substance, to prevent slipping. For the length of pole described one and a quarter to one and a half inches in thickness is sufficient.

Wrestling.

The wrestling exercise contributes essentially to the strengthening of the body, as it brings into play nearly every limb and muscle; but it should be practiced with great caution and coolness, as too much excitement might cause injurious consequences; nor should it be practiced in rooms, on account of the smoothness and firmness of the floor. In Scotland and Switzerland wrestling is a common and favorite exercise.

Construction of Pyramids.

To the Free Exercises must still be added a particular division of "Compound Exercises," called "Construction of Pyramids." This exercise can only be practiced when a number of experienced gymnasts are together. It may not be as useful as other exercises, but it should be practiced in every gymnasium. It contributes mostly to the gracefulness and endurance of the pupil, and prevents dizziness and slipping. In Europe this is a favorite exercise at public performances and feasts. No teacher should allow pyramids to be constructed without the supervision of an experienced leader, whose commands should be strictly obeyed. The movements, in forming the pyramid, should be equal and steady, as well in ascending as in descending. A sudden leaping down or speaking, during the construction of the pyramid, should not be permitted. It does not look well, and may be attended with serious consequences. The principal duty of the leader is to arrange the pupils, according to their size, strength, and weight. Each one must take his place in such order that no interruption or confusion may occur. The pyramid, when finished, should have the appearance of a single body.

EXERCISES ON FIXED INSTRUMENTS.

The Vaulting Horse.

EXERCISES on the Vaulting Horse belong to the highest and, also, most difficult departments, and require a practice, activity, and power, attained only by constant practice in other and easier exercises; consequently, it is practiced but little by children or weak persons. Beginners should never attempt the Vaulting Horse exercises, except in the presence of one or two experienced pupils. When leaping over the horse lengthwise, the saddle should be removed. In leaping with a run, the springing-board can be used, in order to find the right starting point; but it is to be observed that the leap must be made on to the board and from it over the horse, with both feet simultaneously, and never with one foot only, because by doing so the power and direction of the leap would be lost. It is also necessary to mention that there are two kinds of Vaulting Horses—the low one, reaching nearly to the breast, and the high one, measuring the size of an ordinary horse. Our remarks apply only to the former, though the exercise can be performed on the latter by experienced gymnasts.

The Parallel Bars.

This exercise requires considerable exertion, but is one of the healthiest in the list. It contributes more to the development of the breast and shoulders than any other. In the beginning great caution is necessary, in order to prevent the dislocation of the wrist. We would, also, recommend to the beginner not to attempt this exercise without being attended by a leader or an experienced gymnast. In the swinging movement the assistant stands beside the bars and takes hold of the pupil's arms. In this manner the pupil is greatly assisted, and is also guarded against accidents. Many exercises on the Parallel Bars can be practiced by two persons at the same time; some even by four persons. When many practice together it may be observed that the movements are made simultaneously. As a concluding remark on this exercise, we would caution all young gymnasts, just in their childhood as it were with regard to gymnastic exercises, against too early a use of the Parallel Bars—the exercise is so severe as to require considerable strength at the outset.

The Horizontal Bar.

A greater number of exercises are performed on the Horizontal Bar than upon any other instrument. They, however, may be divided into two parts:

1st. *The High Bar.*—This should be so placed as to be reached with a moderate leap from the ground, so that the pupil may be enabled to remain suspended at full length without touching the ground with his toes.

2d. *The Low Bar.*—This must be fixed at the height of the breast, or some four feet from the ground. The exercises on this bar resemble those on the Vaulting Horse.

The ground under the bar should be soft; if possible, tan or grass; sand is not so good. In rooms thick mattresses should be provided, especially when gymnasts are attempting difficult exercises for the first time. The leader should see to it that in exercises of this kind, the body is stretched as much as possible; the legs should remain close together, straight, the points of the feet downward. The arms, also, should be kept continually extended. In all the bar exercises, the pupil should take care that his grasp is firm, he being more apt to slip on this than on any other of the fixed instruments. The thumb should encircle the bar and touch the forefinger. Many neglect to make this grasp, and in consequence the great swings and more dangerous feats are never learned. Besides, a habit of carelessly grasping the bar, while exceedingly dangerous, is, when once contracted, hard to get rid of.

The Rings and Trapeze.

These exercises require more attention and presence of mind than those on the bars. They habituate the gymnast to move himself easily and securely. They are also a good remedy for dizziness, and give the pupil more opportunities for the display of the graces and beauties in the movements of the body, than many other instruments. The rings must be high enough to hold the body clear from the ground. In "giving a swing" to a pupil who is not tall enough to reach the rings, while his body is stretched at full length, take hold of his knees, walk backward as far as you can, and then run sharply forward, making your exit between the pupil's legs. (See Pl. 45, Fig. 19.) The exercises on the Trapeze we have not included in this work. They are mostly a combination of the exercises on the bars and rings and can be easily dispensed with. The exercise might be described as follows: The ordinary trapeze—a bar three or four feet in length—suspended on two strong ropes, and the double trapeze (at which two persons can exercise at the same time). When the movements on the double trapeze are conducted properly, it is pleasing to witness, and becomes the favorite entertainment at public festivals. While excluding the trapeze from our pages, we would also mention that there are many instruments in a well regulated gymnasium, which also have been omitted. The pupil will find that when he is able to manage the principal instruments he will have but little difficulty in going through the entire list.

FEMALES SHOULD EXERCISE.

GYMNASTIC Exercises are intended for females as well as males. Indeed, it may be said with truth, that exercise is much more necessary in the case of the former than the latter, for the reason that women, as a class, are more confined to close rooms than men. Most mothers, we are sorry to see, oppose gymnastic exercise for their daughters, on the ground that it gives the body an ugly shape, enlarges the hands, etc. This is a great error and one we should like to see removed from the public mind.

In Europe, and many parts of the United States, Calisthenic Institutes have been introduced, but where such are not to be found, families should take the matter in hand and make exercise a home study. How easy it would be for parents to devote at least an hour a day to this sort of exercise. The colds, influenza, consumption, short-breath, dizziness, etc., etc., can all be avoided by a hardening of the body; and this can only be done by a regular course of gymnastic exercises. Why is it that we find in the country such strong and healthy women? It is simply because of the daily exercise which they are in the habit of taking. The most suitable exercises for females would be the dumb-bells, running, hopping on one or both feet, etc., etc. They might also exercise on the parallel bars, (which should not be over four feet from the ground) the horizontal bar, the rings, etc. The rings, as well as bars, should be covered with leather. These, however, are but suggestions on our part, for as much depends on the good judgment of the parents to select suitable exercises for their daughters, as upon ours. We have thought proper, however, to mark with a * the descriptions of such exercises as are, in our judgment, most suitable for the female sex.

Fig 2



Fig 3



Fig 1

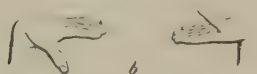
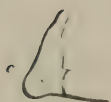


Fig 4



Fig 5



EXPLANATION OF THE EXERCISES.

PART FIRST.

GYMNASTICS ON THE GROUND;

OR, PRELIMINARY EXERCISES, WITHOUT APPARATUS OR INSTRUMENTS. (FREIUEBUNGEN.)

FIG. 1.*—(a) Bend the fingers by pressing them together, or on a table. This exercise is intended to toughen the skin and prevent it from cracking in other and severer exercises. (b) The stretched hand or fist must be bent forward and backward as far as possible. (c and d) Are exercises to make the foot flexible. (d) Is the position of the foot which should be observed in nearly all exercises.

FIG. 2.*—Stand erect and raise one leg quickly as high as possible without bending the knees; return it to the first position and make the same exercise with the other leg. (*Schenkelspreizen.*)

FIG. 3.*—Draw up the thigh rapidly till it touches the breast—the body should not be bent. (*Aufschnellen.*)

FIG. 4.*—An alternate movement from one foot to the other, remaining in place; the extended leg should not be bent in the knee. The weight of the body rests on the point of the foot of the bent leg. (*Cosackengraetsche.*)

FIG. 5.*—Hopping forward, backward, and sideways, which is done by drawing up the thighs; only the points of the feet should touch the ground. (*Hocksitz.*)

FIG. 6.* — Going down and up, on one leg, without bending the body ; repeat the exercise several times, right and left. (*Niederlassen zum Scheinsitz auf einem Bein.*)

FIG. 7.* — Throw the leg backward, so as to touch the back part of the thigh with the calf and heel. The body and thighs must be kept straight ; the motion must be quick. (*Hebbeugen.*)

FIG. 8.* — Bending the body forward, without bending the knees, so as to touch the ground with outstretched fingers, or with the full hand. Remain in that position for a little while. (*Rumpfbeuge.*)

FIG. 9. — Bending the body forward, so as to place the head between the knees ; legs to be kept straight. (*Anstürnen.*)

FIG. 10. — To stand on the head. Can also be practiced with but one hand resting on the ground. (*Handhub.*)

FIG. 11. — An alternate movement from one side to the other, both legs to be kept straight. (*Rumpfbeuge, seitwaerts.*)

FIG. 12. — Pressing the leg against the wall, or pulling it with both hands toward the shoulder until it touches. Generally, can only be practiced successfully in childhood.

Fig 6

"



Fig 9



Fig 7

"



Fig 8



Fig 12



Fig 10

Fig 11

Fig 17.

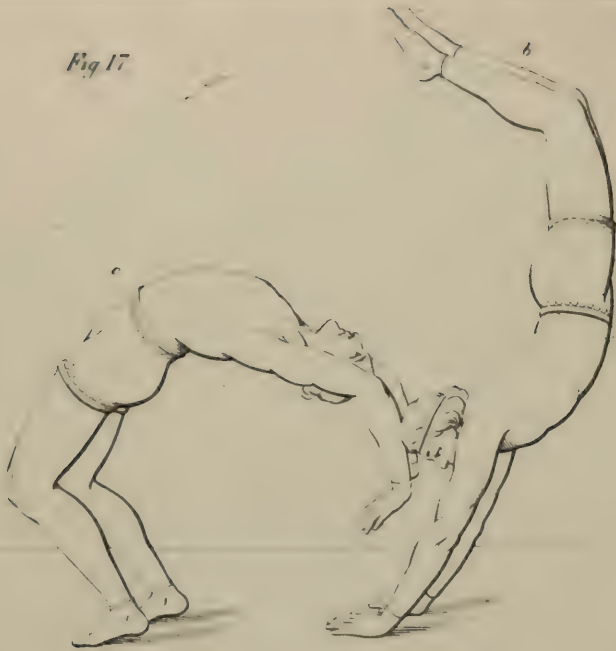


Fig 13.



Fig 15.



Fig 18.



Fig 14.

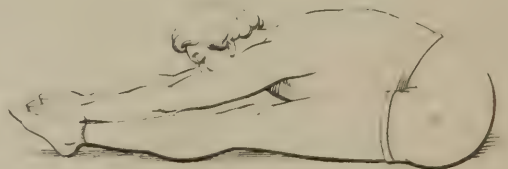


Fig. 16.



FIG. 13.*—An alternate movement forward and backward, so as to touch the ground on both sides. (*Rumpfschwenken.*)

FIG. 14.*—Like Fig. 9, but from a sitting position.

FIG. 15.—“*To bend the Crab.*” Grown persons are to be very careful in exercising this feat. From this position the “Back-Handspring” can be executed. (*Kreutzbiege rueckwaerts.*)

FIG. 16.—Being supported by the arms, (like *a*) pass your legs rapidly between the arms to position *b*, and back again to the first position, and repeat. (*Durchhocken, vor-und rueckwaerts.*)

FIG. 17.—The “*Handspring.*” To be done with a run, or going over slowly from an erect position on the hands. This is the most difficult manner; beginners should not try it, unless on a mattress. (*Ueberschlag.*)

FIG. 18.—The “*Cartwheel.*” The body should form a complete circle, only the hands and feet to be allowed to touch the ground. Can also be done with one hand. (*Radschlagen.*)

[PL. 3.]

FIG. 19.* — From an erect position on one foot, (*a*) to bend forward and take from the ground with the mouth a piece of wood, not more than half an inch in height, and then return to first position; no part of the body, excepting the one foot, to touch the ground. (*Anmunden.*)

FIG. 20. — To stand erect on the hands at arm's length, with legs and body straight. From which position walk forward and backward; likewise jump with both hands at the same time. (*Handstand.*)

FIG. 21. — Like Fig. 20, excepting to clap the hands at every jump. This is a very difficult, but very fine feat; it should only be tried when the preceding one can be executed with great facility.

FIG. 22.* — To spread the legs from both sides of the body as far as possible; the return to first position must be executed without any assistance from the hands. (*Graetsche.*)

FIG. 23.* — Like Fig. 22, excepting to spread the legs *forward* and *backward*, instead of *sidewise*. Experienced gymnasts can change from one position to the other by a quick turn. (*Gaffeln.*)

FIG. 24. — The legs to rest on the shoulder, the body being supported by the arms. (*Hockschrwebe.*)

FIG. 25. — Like Fig. 24, with the addition of jumping with the hands and at every jump clapping them together.

FIG. 26. — See Special Rules and Regulations at "Gymnastics on the Ground."

FIG. 27. — Jump over the stick, forward and backward. (*Stabspringen.*)

Fig 19

Fig 22



Fig 23

Fig 27



Fig 24



Fig 25

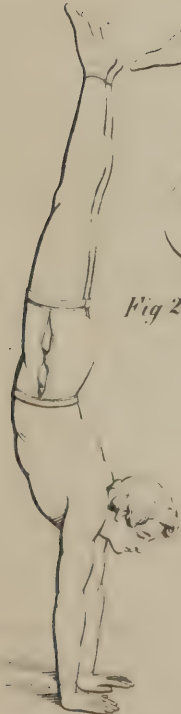


Fig 20

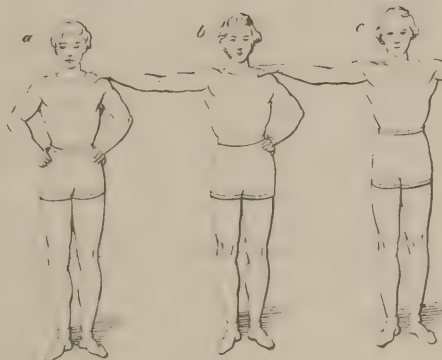


Fig 26

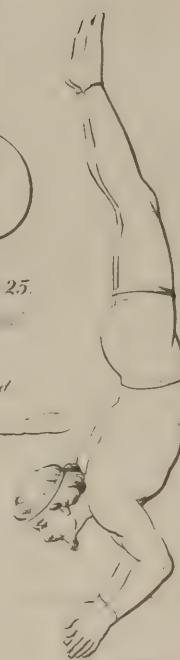


Fig 21

Fig 28



Fig 30



Fig 29



FIG. 28.—A continual turning over, best explained by the plate. Performers of this feat should be of the same size and strength. (*Rueckwippe von Zweien.*)

FIG. 29.—“*The Mill.*” Also best explained by the plate. *B* to raise *A* with his (*A*’s) assistance, and after throwing him over his head to let him drop gradually to the ground, thus giving him the same position that he (*B*) first occupied; and so on alternately. (*Muehle von Zweien.*)

FIG. 30.—“*The Giant Turn.*” *A* swings *B*, by a strong impulse of the arms from 1st position, over his head, as described by 2d position. The best but most difficult manner of performing this feat is with the arms straight. (*Riesenueberschwung.*)

[PL. 5.]

PART SECOND.

GYMNASTICS WITH MOVABLE IMPLEMENTS.

(UEBUNGEN MIT BEWEGLICHEN TURNGERAETHEN.)

FIG. 1.* — A quick turning motion with extended arms, forming a small circle. Take light dumb-bells at beginning and practice it at least one minute. (*Drehschwingen.*)

FIG. 2.* — To stretch the arms forward at right angles with the body and parallel to each other, then move them slowly backward as far as possible, afterward returning to first position. The arms are not to be allowed to drop below a horizontal line. (*Wagerechte Halbkreis.*)

FIGS. 3* and 4.* — To lift a sand-bag in the manner represented. In the forward motion the leg and body should be kept straight; but in the backward one it is allowable to bend the leg; the bag must not be too heavy. (*Heben mit der Ferse und Rist, vor-und rueckwaerts.*)

FIG. 5. — *a*, *b*, and *c*, is one of the most difficult but strengthening exercises for the legs. To stand on the points of your feet (*a*), go down on your knees, without bending the body forward (*b*), then place your back on the ground as in position *c*. Return to the first position in the same manner; motion must be slow.

FIG. 6. — Is executed like Fig. 5, but using the body of another person as a weight, instead of the dumb-bells. This belongs rather to Part First, "Gymnastics on the Ground."

Fig 1.



Fig 2



Fig 5

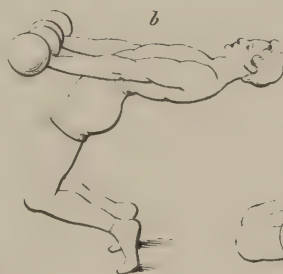


Fig 3

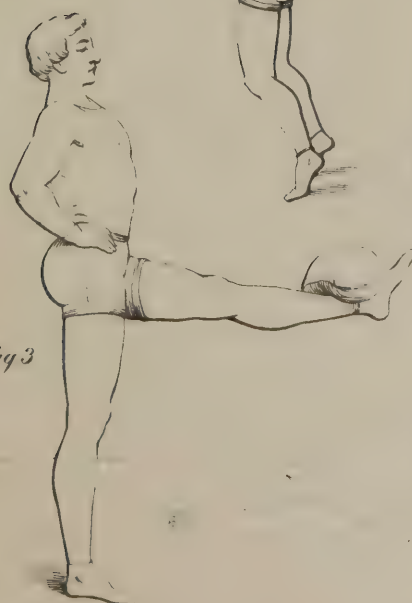


Fig 6

Fig. 4

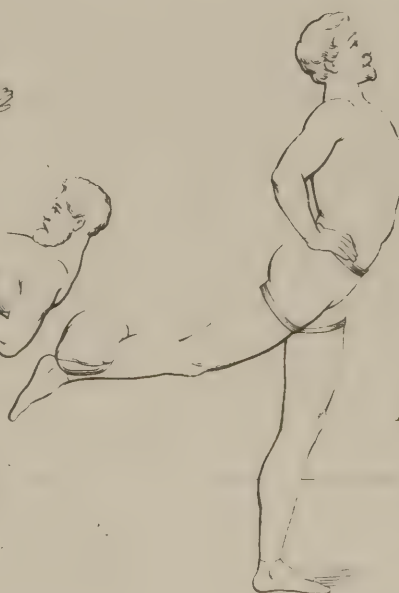


Fig 9



Fig 10



Fig 7



FIG. 7.—“*Winding the Staff.*” Press one end of the staff firmly on the ground (*a*), pass your head and the upper part of your body under the left arm to the other side (*b*) and up to position *c*, returning in the same manner. The staff must be kept perfectly perpendicular during the exercise, or else it will slip. (*Das Stabwinden.*)

FIG. 8.*—“*Swinging the Clubs.*” Take the club by the end and balancing it in front, in a line with the mouth, let it drop backward over your head, and by a movement given to it describe a circle, and bring it over the shoulder in the first position; repeat this exercise many times with the right and left hand singly, then with both clubs at the same time. (*Keul-schwingen.*)

FIG. 9.*—To execute with one arm the motion described in Fig. 8, and at the same time describe a complete circle with the other, in front of the body; which motion brings the arm and club in position to alternate the two motions.

FIG. 10.—“*The Flag.*” Properly belonging to Part Third, “Gymnastics on Fixed Apparatus.” Draw your body up rapidly with the aid of a light spring, into a horizontal position. It can be done slowly and without the aid of a spring—more difficult, but better. The arm which holds the lower handle supports nearly the whole weight of the body. (*Stemmfahne.*)

PART THIRD.

GYMNASTICS ON FIXED APPARATUS AND IMPLEMENTS.

(ÜBUNGEN AN FESTSTEHENDEN TURNGERÄTHEN.)

The Vaulting Horse.

NOTE.—The Horse and the Parallel Bars are sometimes movable, and could be placed in the Second Part; however, they belong to this division, because they are generally fixed in the ground, or are too heavy to be moved with facility.

FIG. 1.—“*Mounting.*” Stand by the horse, place one hand on each pommel (*a*), spring up, pass the leg, well extended, over the croup, into the saddle (*b*), at the same time shifting the hand to the front pommel (*c*). (*Aufsitzen in den Reitsitz.*)

FIG. 2.—Hands on pommels, spring up, pass both legs over the croup (*a*), behind the saddle (*b*), and jump to the ground. Or, return the same way by a strong impulse of the body, completely round the horse, spreading the left leg (*c*) and bringing the body into a sitting position into the saddle (*d*). (*Die Wende.*)

FIG. 3.—“*The Maiden Jump.*” Hands on pommels (*a*), spring up, let go the left hand, pass the right leg over the horse (*b*), and sit the saddle as before (*c*); return in same manner to first position. (*Jungfernsprung.*)

Fig 1



Fig 3

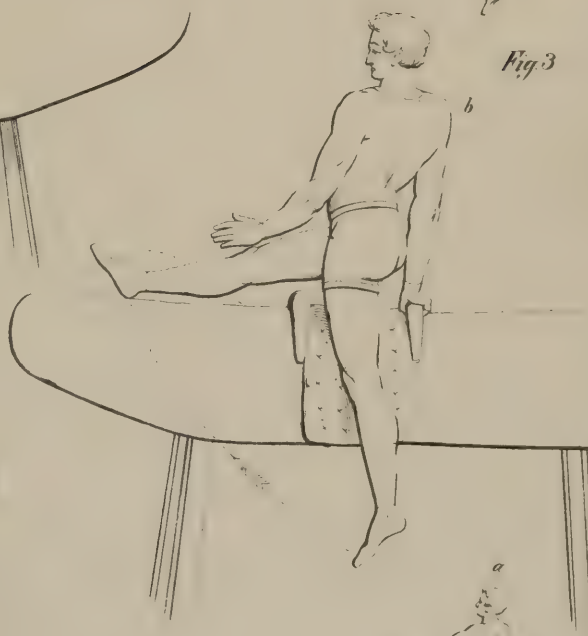


Fig 2



Fig 4



Fig 6



Fig 5



Fig 7

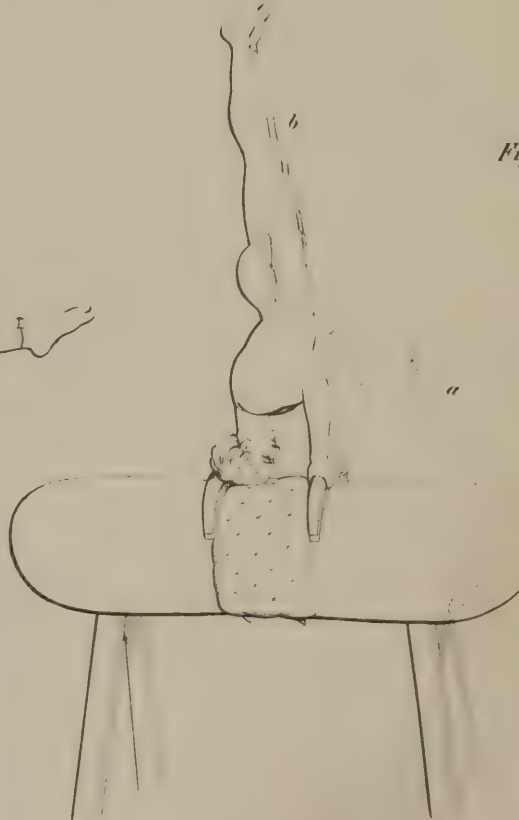


FIG. 4.—Taking hold of the pommels, as before (*a*), spring up and place the feet on the croup of the horse (*b*). (*Kreuzaufsprung.*)

FIG. 5.—Spring up and let the feet pass through, between the hands, and then, bringing the legs to a position at right angles with the body, remain upheld by the arms only. Legs must be kept straight. (*Schwebsitz.*)

FIG. 6.—“*Going through between the Arms.*” Keep the body supported by the hands (*a*) and pass the feet and legs through, between the arms, forward and backward, without touching the saddle with the feet. (*Durchhocken, vor-und rueckwaerts.*)

FIG. 7.—“*To stand on the Head.*” Raise the legs slowly. In descending give the body an impulse backward, at the same time raising it with the arms, and drop down on the ground behind the horse. (*Kopfstehen.*)

FIG. 8.—“*To throw the Summerset backward.*” With a powerful effort throw your body over, so as to come to the ground on the other side of the horse. Keep the legs straight and feet together. (*Abburzeln, rueckwaerts.*)

FIG. 9.—“*The Bear Jump.*” Sit in the saddle, embrace the horse’s neck and throw your legs over, so as to stand on the ground. (*Baerensprung.*)

FIG. 10.—“*The Giant Leap.*” Run toward the horse, to give yourself such an impulse that, with a spring, you can put the hands on the neck of it (*a*) and pass over the entire length (*b*). The high pommels should be taken out. (*Laengensprung.*)

[PL. 10.]

Fig. 8



Fig. 9

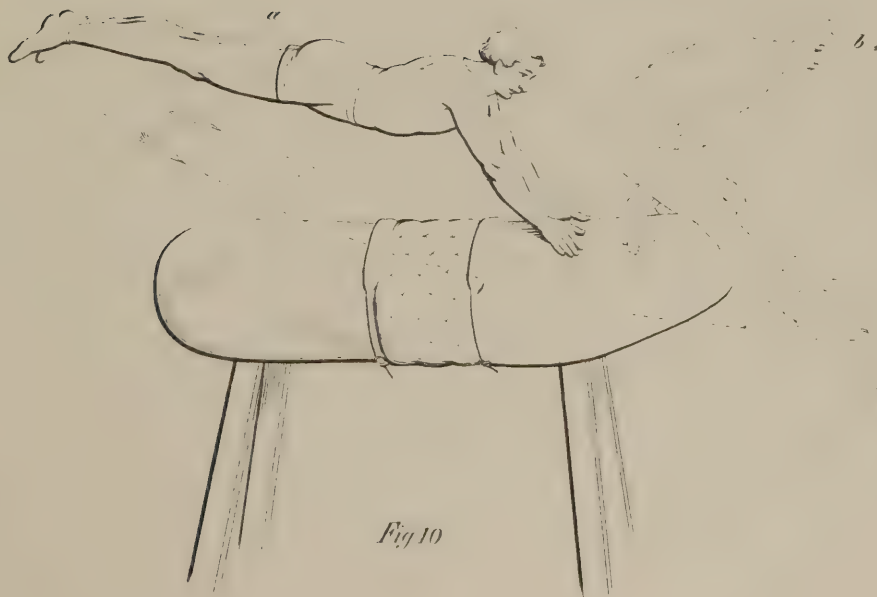


Fig. 10

The Parallel Bars.

FIG. 1.*—“*To lower and raise the Body by bending and straightening the Arms.*” Lower the body as much as possible and raise it again by an effort of the arms, repeating the same movement several times, both slowly and quickly. In this, as in nearly all the exercises on the parallel bars, the body and legs should be kept straight and the latter well together. (*Stuetz-wechseln.*)

FIG. 2.*—“*Walking on the Bars.*” Walk forward and backward by advancing the hand alternately, keeping the elbows straight. When this can be done with ease vary the exercise by turning the arms so as to walk with the fingers on the *inside* of the bars. (*Wechselgreifen im Streckstuetz.*)

FIG. 3.*—“*To spring Forward or Backward by a simultaneous Motion of the Arms.*” A feat difficult to do well. Head erect, chin and chest projecting, legs and upper part of the body straight and stiff. (*Streckstuetz-Wandern.*)

FIG. 4.*—“*The Grasshopper.*” Jump along the bars, forward and backward, with both arms. The body must not be raised high enough to allow of the arms being straightened. A variation of the exercise, called “The Grasshopper Walk,” can be done by advancing the arms alternately. (*Knickstuetz-Huepfen.*)

Fig 1



Fig 2

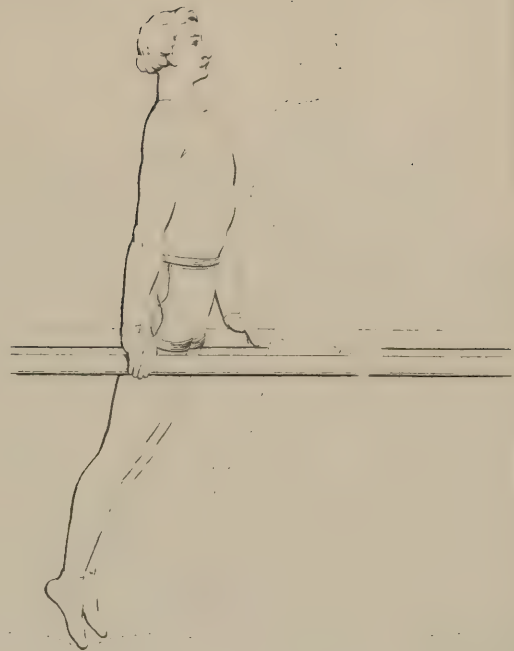


Fig 4

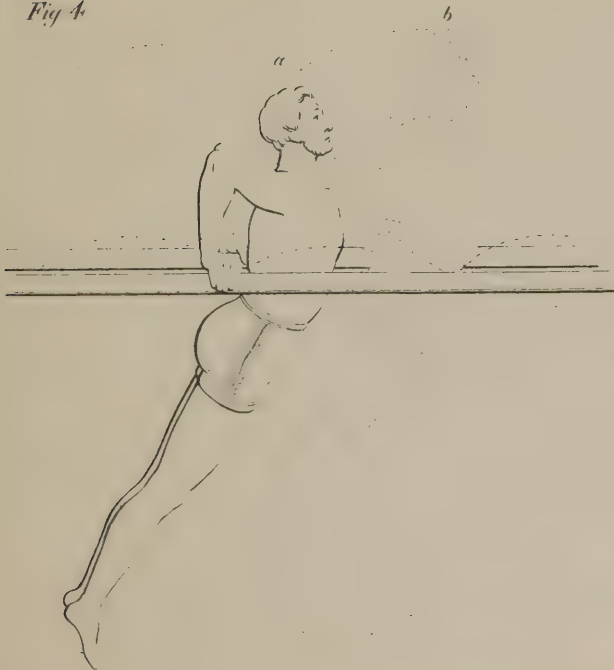


Fig 3



Fig. 5.

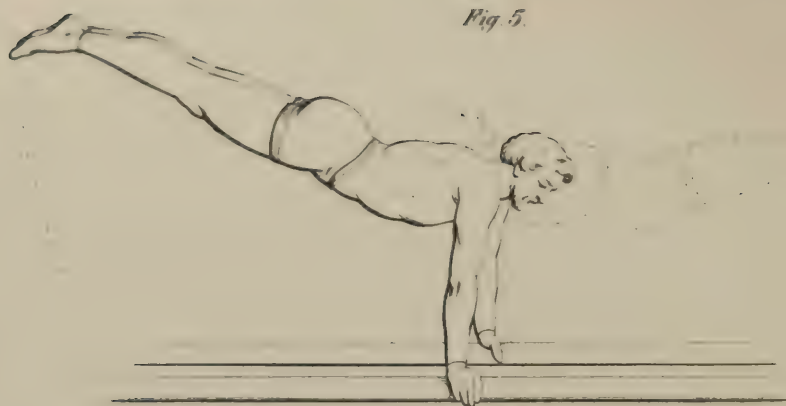


Fig. 6



Fig. 7.

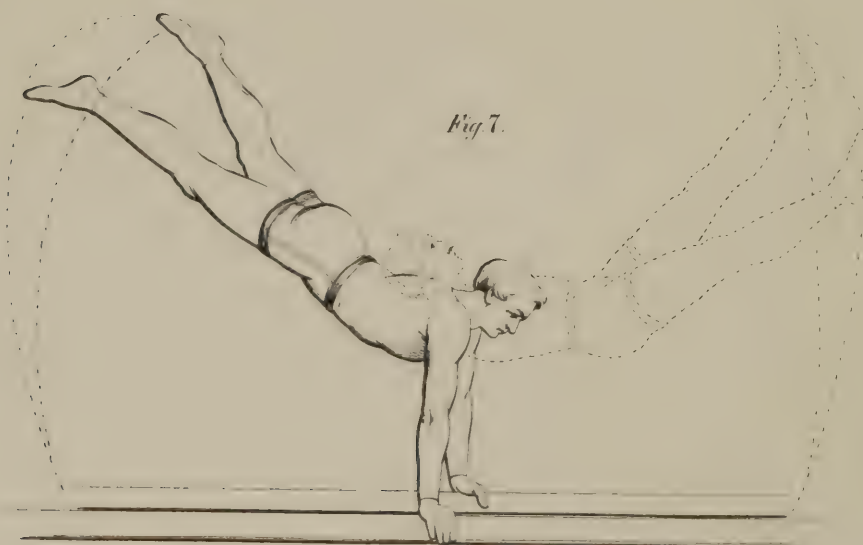


FIG. 5.*—“*The Swing.*” Arms and body must be straight. Swing the legs forward and backward sufficiently high to form a right angle with the body. (*Steifwippen.*)

FIG. 6.*—“*The Grasshopper Swing*” is the same as the preceding exercise, except that the arms are to be kept bent instead of straight. (*Knickstuetzwippen.*)

FIG. 7.*—Same as Fig. 5, excepting that the legs are to be spread and then struck together at each swing. (*Graetschwippen.*)

[PL. 13.]

FIG. 8.*—Jump backward with the aid of a swing; the arms must remain straight. The forward jump is executed in the same manner. (*Streckstuetz-Schnellen.*)

FIG. 9.*—“*The Grasshopper Spring.*” With the aid of a swing, and a sudden impulse given with the arms, leap forward on your hands. Care must be taken to keep the balance of the body. The same backward. (*Knickstuetz-Schnellen.*)

FIG. 10.—Rest on the bars with the arms (*a*), and with the aid of a swing forward raise the body on the hands at arms length (*b*), and then as the body drops, in the return swing backward, catch the bars under the arms again; and so on alternately. Vary the exercise by raising the body at the backward swing. (*Armfall-Wippe.*)

[PL. 14.]

Fig. 8.



Fig. 9.



Fig. 10.



Fig 11

Fig 14



Fig 12

Fig 15



Fig 13

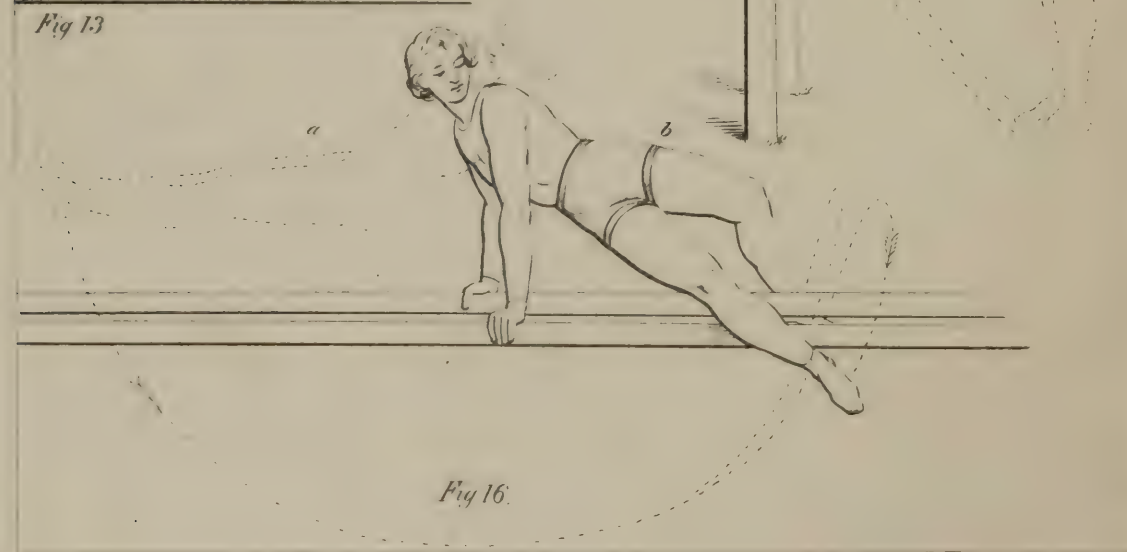


Fig 16

FIG. 11.* — “*The Lion Walk.*” While holding the body with one arm (a little lower down than shown in position *a*) throw the other well forward, grasp the bar with the hand, and by an exertion of both arms bring the body slowly into position *b*, to be sustained by one only and on the opposite side to that first described. (*Loewenschritt.*)

FIG. 12.* — Jump along the bars with the arms, forward and backward, in the position described by the plate.

FIG. 13.* — Jump along the bars with the hands, the body to form a right angle with the legs, while the latter must be kept straight and well together. (*Schwebebehandeln.*)

FIG. 14. — “*The Frog.*” Knees must be pressed firmly to the elbows. The jump is made solely and entirely with the arms; the body must not be allowed to get out of the position described. (*Der Frosch.*)

FIG. 15. — From position *a* spring up, and letting go one hand at the instant that your arms are straightened, pass the leg quickly between the bar and the hand, and at the instant that the leg is fairly over, grasp the bar again with the hand and drop the leg between the bars alongside its fellow. Can be varied by passing both legs at once over the bars at the same instant, of course relinquishing the grasp of each hand. Rather dangerous. (*Aufgraetschen in den Stuetz.*)

FIG. 16.* — “*The Shears.*” Sit astride the bars, having your hands resting on them behind the body (*a*), and raising the feet swing through the bars and come up astride them on the other side (*b*); your arms will then be twisted, and your face will be looking in the opposite direction. Swing boldly and freely to avoid striking the shins against the bars, as this last motion will be apt to create a distaste for the exercise. (*Die Scheere.*)

FIG. 17.* — “*The Double Eagle.*” Lower and raise the body by bending and extending the arms. Should be done both with and without the aid of a swing. (*Doppel-Adler.*)

FIG. 18. — “*The Roll Backward.*” Rest on the forearms and swinging forward raise the legs above your head and turn completely over backward into first position with the bars under the arms. (*Rolle rueckwaerts.*)

FIG. 19. — “*The Roll Forward.*” Sit astride the bars and, spreading the arms (*a*), turn over forward (*b*), catching with the knees on the bars. Or, let the legs fall between them so as to rest the entire weight of the body on the arms. (*Rolle vorwaerts.*)

[PL. 16.]

Fig. 17.

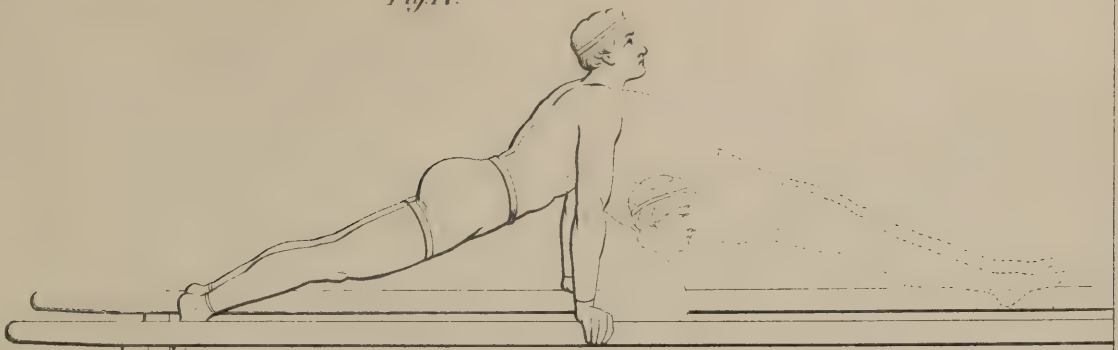


Fig. 18.

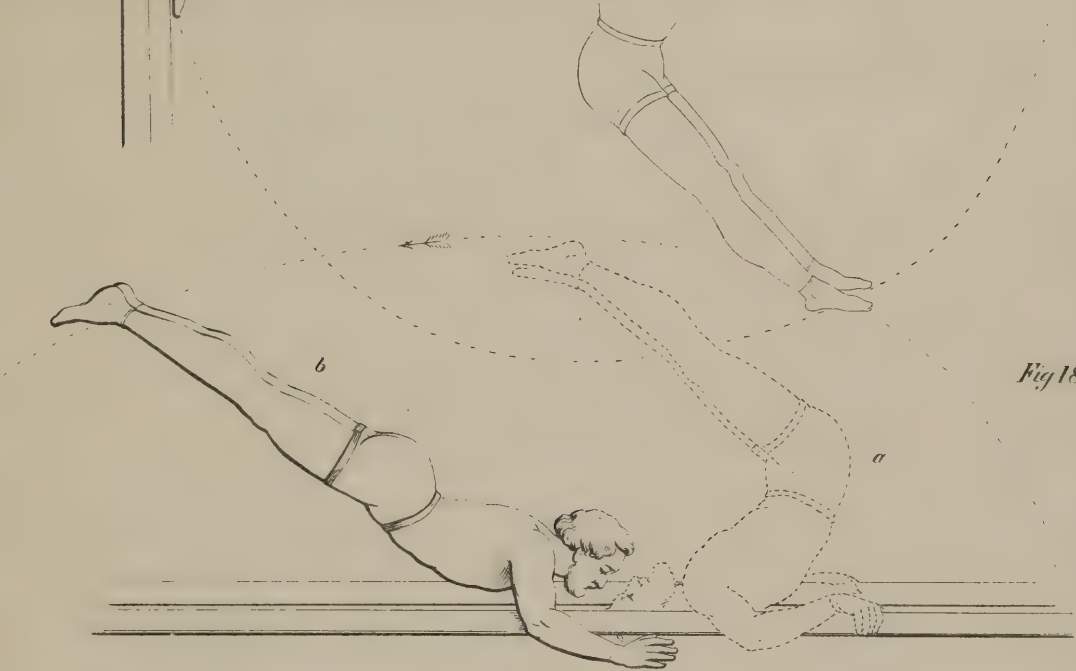


Fig. 19.

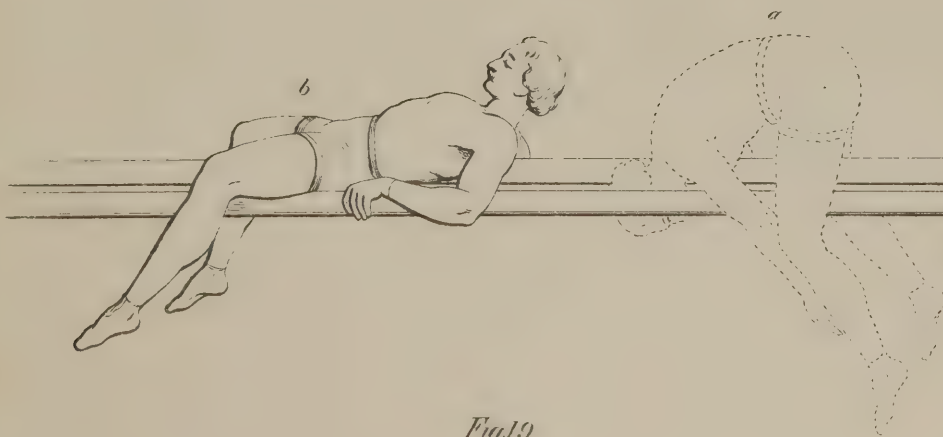


Fig 20



Fig 23

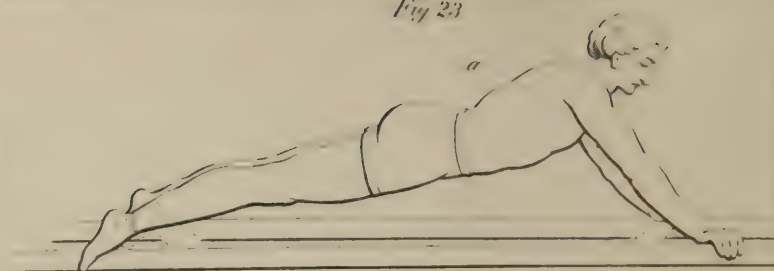


Fig 21

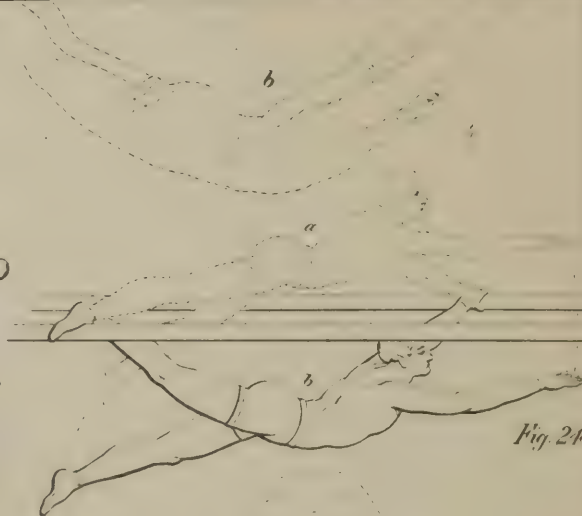


Fig 24



Fig 22



Fig 25

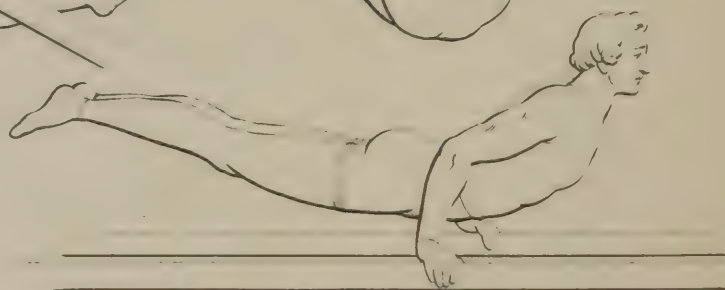


Fig 26

FIG. 20.— Being suspended by the arms, swing the legs up so as to stand on the bars behind the hands, the legs being kept perfectly straight. (*Affenstand.*)

FIG. 21.— Sit on one of the bars with the feet under the opposite one, and then drop the body slowly, as far as possible, like in position *b*; returning again to first position. (*Kniehalthang.*)

FIG. 22.— Is to be practiced like Fig. 21, excepting to use but one leg.

FIG. 23.*— Stretch the hands well forward and the feet well backward into position *a*, then let the body drop slowly between the bars, being supported by the hands and feet only, into position *b*. The return to first position must be made without bending the arms or legs, but by pushing the arms forward and the legs backward, so as to straighten the body. (*Schwimhang aus der Stuetze.*)

FIG. 24.— Like the preceding, except with only the right arm and the left leg, or *vice versa*. One of the most difficult feats.

FIG. 25.— Kneeling with the knees and insteps on one bar, with the hands on the opposite one and with the legs and arms well spread apart, let the body gradually drop between the bars into position *b*, and return again to position *a*. (*Schwimhang Barrenqueer.*)

FIG. 26.*— Being suspended by the arms lean forward and raise the legs slowly so as to place the whole body in a horizontal position, and there remain for a short time. (*Wage aus dem Heben rueckwaerts.*)

FIG. 27.* — “*From position a to jump over either Bar to the Ground.*” Being suspended by the hands throw the legs and body, with the aid of the arms and a swing forward, over the right or left bar and drop to the ground. A slight push with the arms is sufficient to throw the body over. (*Kehrschwung vorwaerts.*)

FIG. 28.* — Like the preceding, except that the body is thrown over the bar *behind* the arms. (*Wendesprung rueckwaerts.*)

FIG. 29. — “*To Jump off from the end of the Bars.*” Being suspended on them give an impulse to the body backward, spread the legs and throw them over, and letting go the hands drop to the ground. (*Abgraetschen.*)

FIG. 30. — Sit on one bar (*a*), raise the legs against the stomach (*b*) and, throwing them over the opposite bar (*c*), give an impulse with the arms, and then let go the hands and drop to the ground. (*Uebersprung aus dem Seitsitz.*)

FIG. 31. — “*An alternate Movement from one Arm to the other, describing about the third part of a Circle.*” Legs and body must be kept straight and passed slowly from side to side. (*Wagueberheben.*)

Fig 27



Fig 30.



Fig. 29.



Fig. 28

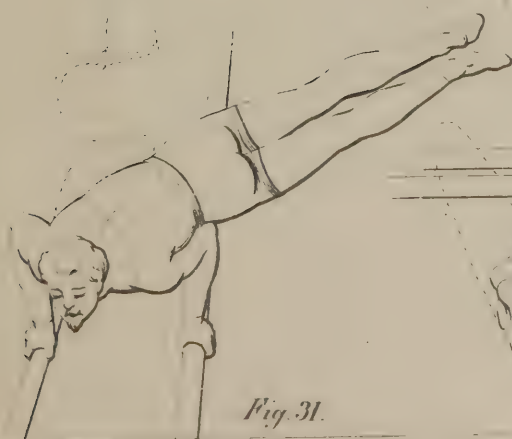


Fig. 31.



Fig 34

Fig 32



Fig 35

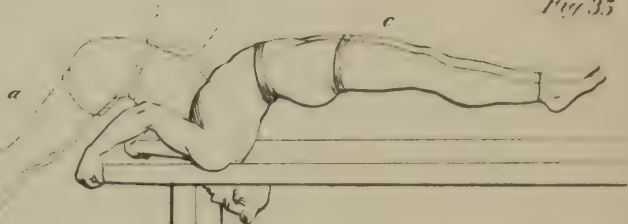


Fig 37



Fig 36

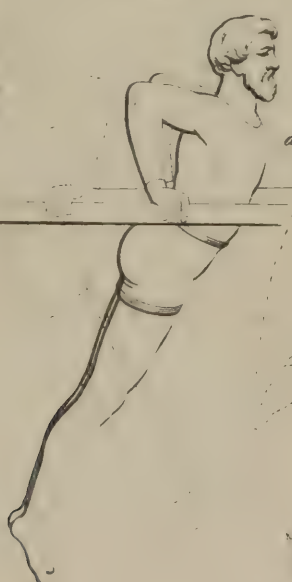


Fig 33



FIG. 32.* — From position *a* raise the body slowly to position *b*, keeping the arms close to the side, the legs straight, and expanding the chest as much as possible. (*Aufstemmen.*)

FIG. 33. — “*To raise the Body vertically.*” Being suspended by the hands bend the upper part of the body forward, the whole weight being on the wrists (*a*), raise the legs up slowly to position *b*, remain a few seconds and then return as slowly as possible to first position. (*Handhub.*)

FIG. 34. — “*To turn over Backward.*” Lay the body over one bar with the neck resting on the opposite one (*a*), raise the legs slowly, and when in position *b* let go the hands and drop to the ground. (*Abburzeln.*)

FIG. 35. — Take hold of the end of the bars and resting the shoulders on them (*a*), raise the body up slowly to the vertical position (*b*), then dropping the body slowly to the horizontal position (*c*) there remain a few seconds and return slowly to the first position. (*Verschraenkte Wage.*)

FIG. 36. — Being suspended on the bars lower the body by bending the arms, and by a strong impulse from right to left, or from left to right, at the same time springing up from the bars, turn the body so completely round so as to face in the opposite direction. Can also be executed with the arms straight, or as before, aided by a swing. (*Knickstuetzkehre.*)

FIG. 37. — Like the preceding, except from one bar to the other. (*Streckstuetzkehre.*)

FIG. 38.—“*To Kneel on one Bar and Jump over the opposite one.*” From position *a* spring to the ground over the opposite bar by a sudden straightening and throwing forward of the body and arms. Keep the arms straight out in front to guard against any accident. Should the feet catch on the bar a fall would be the result, and in such a case a mattress would be found softer than the floor. (*Der Kniesprung.*)

FIG. 39.—Suspend the body with the forearms resting on the bars, and swing it to a vertical position, as in the plate. Legs together and straight, toes pointing upward. (*Armstand.*)

FIG. 40.—“*To throw the Body over by a Swing and catch on the Arms.*” Cannot well be described. A mattress and two assistants, one on each side of the bars, will serve to guard against the ill effects of any accident in a first attempt. (*Ueberschlagen.*)

[Pl. 20.]

Fig 38

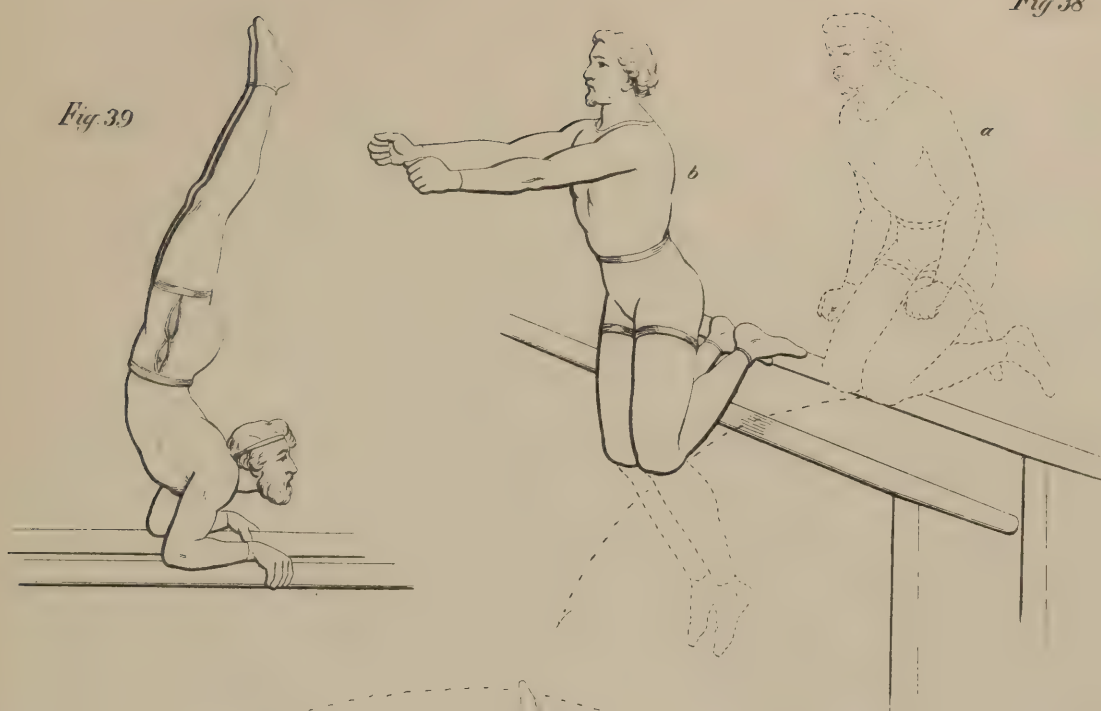


Fig. 39

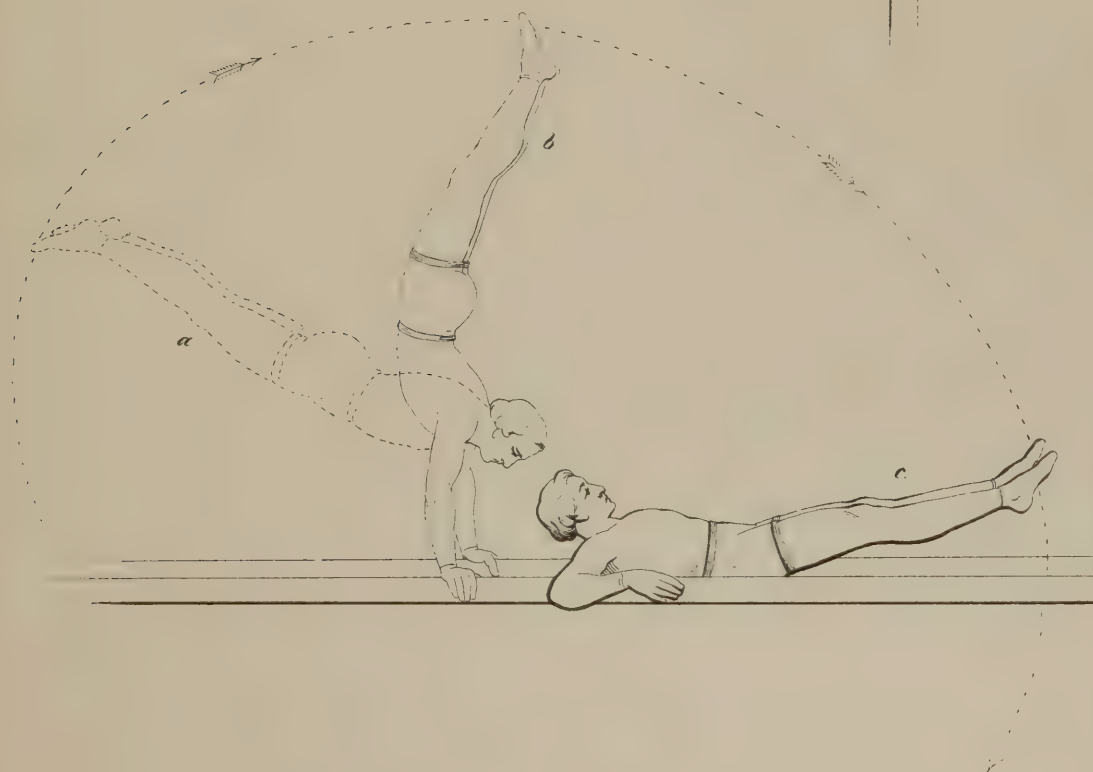
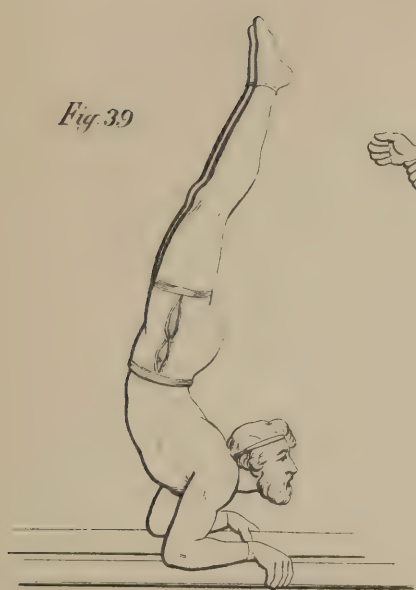


Fig. 40

Fig 42



Fig 43



Fig 44



Fig 41



FIG. 41.—“*To stand on the Neck.*” To be executed like Fig. 34, except to remain in a vertical position instead of dropping to the ground. One hand must be on top of the bar and the other under. (*Knickstehen.*)

FIG. 42.—Suspend the body on the bars at straight arms, swing from position *a* to position *b*, head well back on the neck, to prevent the body from going over too far. The old and universal rule of body and legs as straight as possible and the latter well together. Can also be done by raising the body up slowly; this, however, requires a great deal of strength. (*Handstand im Schwung.*)

FIG. 43.—“*To walk on the Bars with the Hands, forward and backward.*” The arms must be bent slightly as each *step* is made. The exercise may be varied by *jumping* along, forward or backward, with a simultaneous motion of the arms. Difficult and requiring great strength. (*Handgehen.*)

FIG. 44.—“*The Death-Jump.*” Swing the body up and over, so as to drop on the ground in front of the bars. Care must be taken that the body is well over, and indeed almost halfway to the ground before letting go the hands. (*Todtensprung.*)

[Pl. 21.]

FIG. 45.—“*The Circle.*” Take hold of both bars, the legs outside of one bar (*a*), and by a strong impulse throw the legs backward and over the bars; when fairly over let go the left hand and pass the legs forward and over the left hand bar (*b*), so that the body will be suspended *between* the bars (*c*). Or, by a more vigorous impulse, throw the legs entirely round to the same bar from which you started (*d*). (*Der Kreis.*)

FIG. 46.—Jump or walk along the bars in the position as shown by the figure; legs perfectly straight. (*Schweb-Wandern ruckweis.*)

FIG. 47.—The four gymnasts performing this feat should be of the same size and weight. After the knees and feet are well interlaced, as shown in the birdseye view (*B*), raise the arms above the head and all go down slowly and together (*A*). If there is found to be strength enough in the knees, let each gymnast take hold of the hands of the one opposite and so add to the beauty of the feat. Cannot be performed on bars, which are too wide apart.

Fig 45



Fig. 46



Fig. 47.

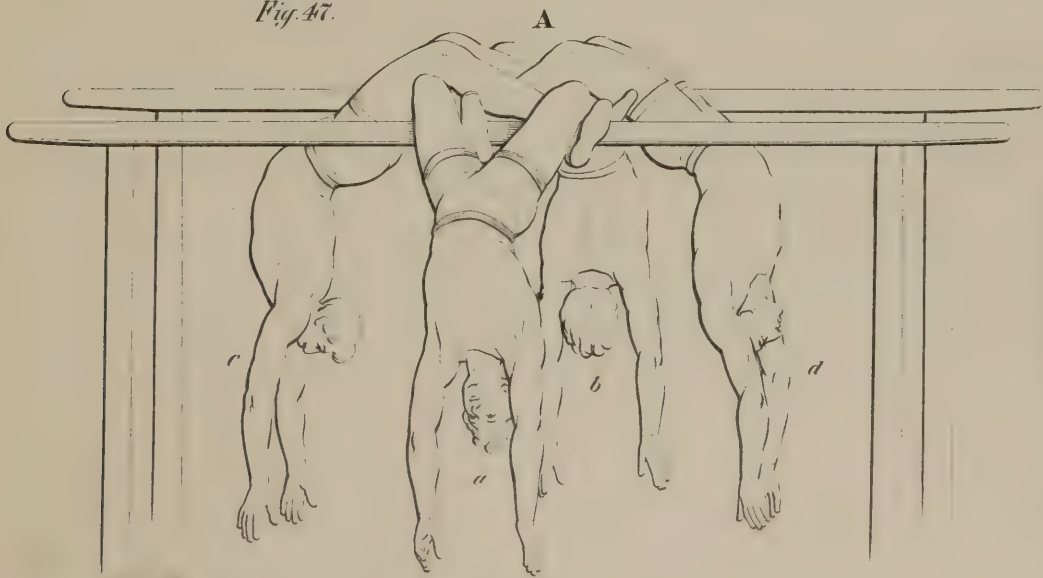


Fig 48

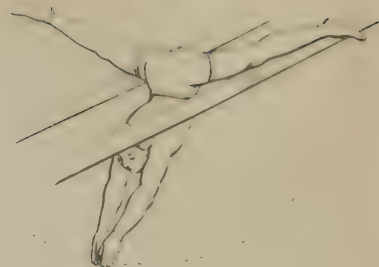


Fig 49

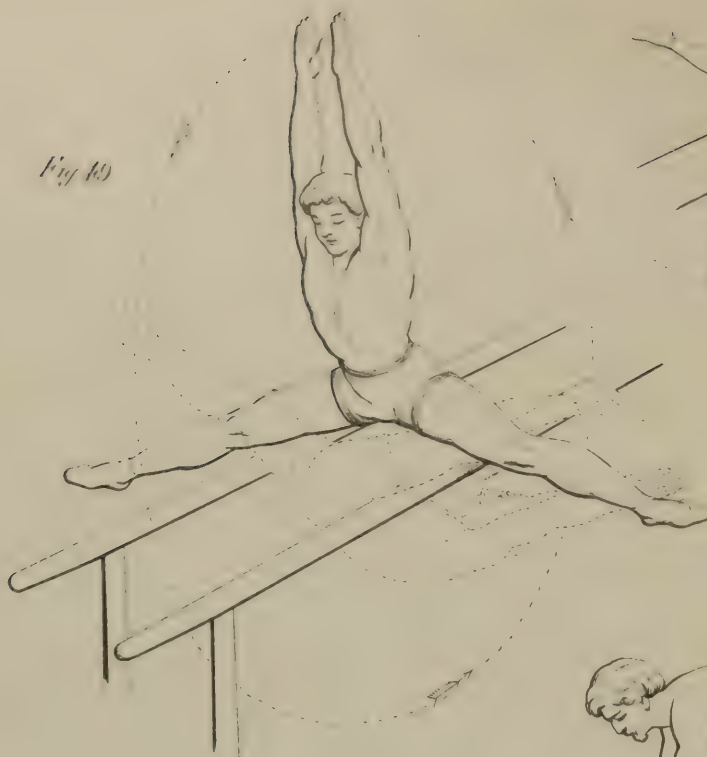


Fig 52

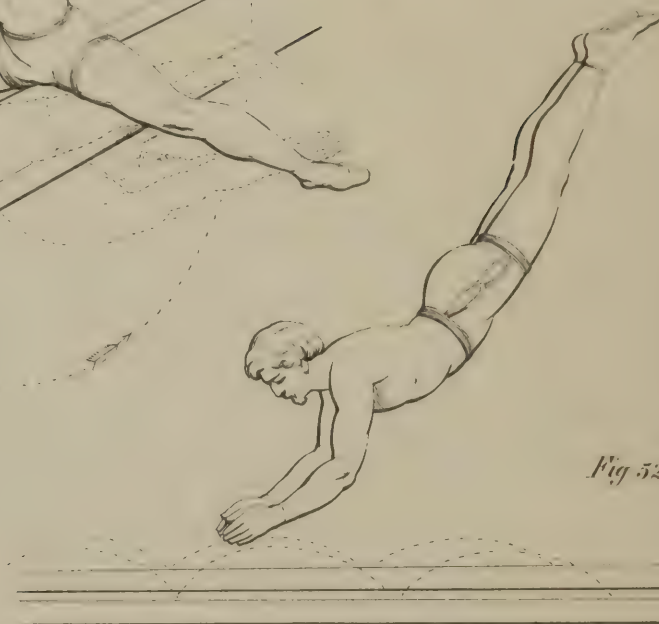


Fig 50



Fig 51

FIG. 48. — Hang by the thighs and swing forward and backward as high as possible. (*Voruebung zum Schenkelumschwung.*)

FIG. 49. — Is a continual turning on the thighs without using the hands. Should only be attempted when the preceding exercise can be executed with great facility. (*Schenkelumschwung.*)

FIG. 50.* — Stretch the arms out backward and grasp with the hands the bars, then raise the body to a horizontal position. (*Wage mit ruckwaerts aufgelegten Armen.*)

FIG. 51.* — Like the preceding, except to extend the arms forward and raise the legs up in the same direction. One of the most difficult feats on the parallel bars; requires great strength in the muscles of the belly. (*Wage mit vorwaerts aufgelegten Armen.*)

FIG. 52. — Swing the body up to the attitude described in the plate, and then with a sudden impulse of the arms jump backward, clapping the hands together before catching the bars again. The jump can be made at pleasure in the opposite direction by swinging the body up forward instead of backward; clap the hands together as before. Take care to swing and jump high enough to enable you to catch the bars again and avoid a fall. (*Zusammenschlagwippe.*)

[PL. 23.]

The Horizontal Bar.

Figures 1, 2, and 3, are the different suspensions by the hands :

FIG. 1.* — “*The Uppergrasp.*” (*Aufgriff.*)

FIG. 2.* — “*The Undergrasp.*” The palms of the hands turned toward the body. (*Untergriff.*)

FIG. 3.* — “*The Double Grasp.*” One palm turned from and the other toward the body. (*Zwiegriff.*)

FIG. 4.* — “*The L.*” Holding by the hands, raise your legs slowly, keeping them perfectly straight, to a position at right angles with the body, and there remain as long as possible. (*Seitschwebehang wagerecht.*)

FIG. 5.* — Raise the legs slowly, keeping them straight, until you touch the bar with the ankles or insteps. (*Seitschwebehang senkrecht.*)

FIG. 6.* — “*Passing through the Arms.*” Hang by the hands and bring the feet between them without touching the bar, permitting them to pass through and drop until they nearly touch the ground ; return in the same way. (*Durchzug aus dem Hang.*)

FIG. 7.* — Hang by the hands, raise your legs up backward, hitch the toes over the bar, and let the body sink, so as to hang by the hands and feet. (*Nesthang.*)

Fig 1



Fig 2



Fig 3

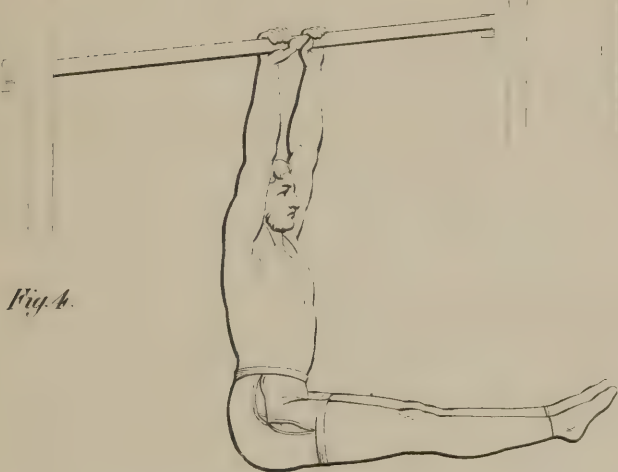


Fig. 4.

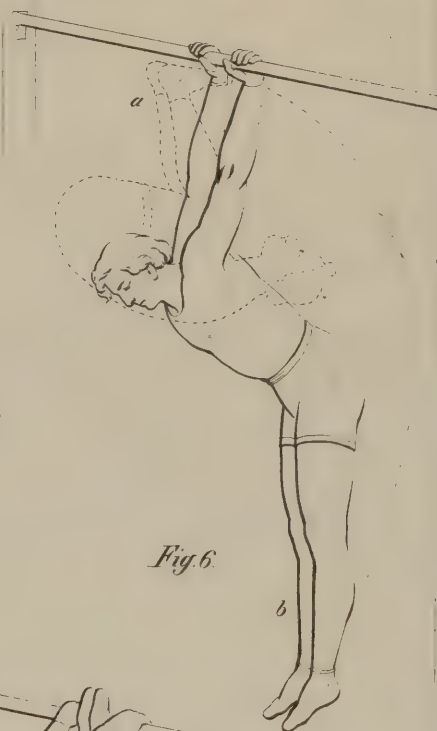


Fig. 6.



Fig 5

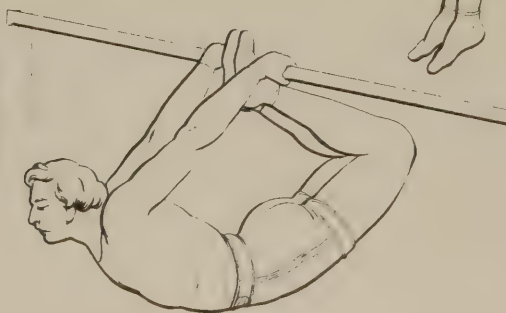


Fig. 7

Fig 8



Fig 10



Fig 11



Fig 9

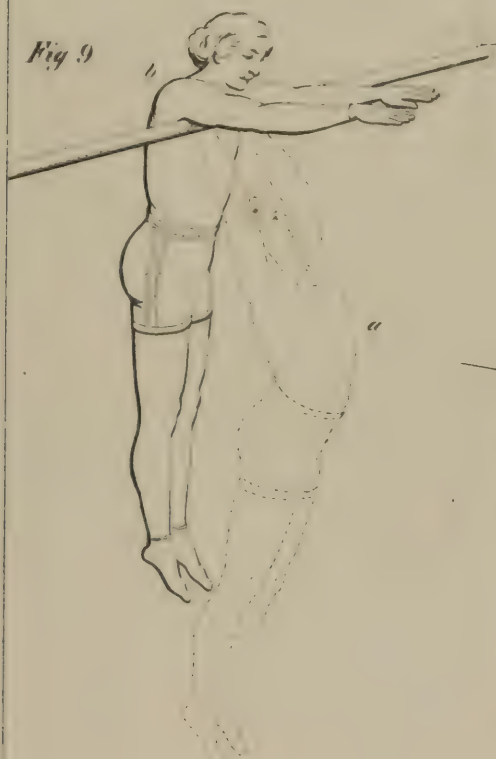


Fig 12

Fig 13



FIG. 8.* — “*To Walk forward and backward while hanging at Arms-length.*” Can also be executed with the arms bent, at “Half-Arm.” (*Messgriff.*)

FIG. 9. — Raise the body up quickly by an effort of the arms and chest, let go the hands and thrust the arms over the bar, so as to remain suspended by the upper arms. To return, raise the body and drawing the arms quickly back catch with the hands and drop the body to first position. (*Wechsel aus dem Aufgriff in den Armhang.*)

FIG. 10.* — Being seated on the bar (*a*), lower the body as far as you can (*b*), and raise up again to the first position. (*Anschultern.*)

FIG. 11.* — From a sitting position raise the legs up slowly till they are perfectly at right angles with the body. (*Streckstuetz-Schwebe.*)

FIGS. 12* and 13.* — “*To change the Grasp.*” After raising the body nearly to “Half-Arm,” a quick movement will enable you to change the grasp before the body can drop to the ground. (*Griffwechsel.*)

[PL. 25.]

FIG. 14.* — “*To change Position from one Hand to the other, the weight of the Body to be supported by the bent Arm.*” In changing keep the body close to the bar. (*Griffwechsel aus dem Knickstuetz.*)

FIG. 15. — “*To change the Seat without using the Hands.*” The legs must be passed *quickly* over the bar, either simultaneously or alternately. A dangerous feat. (*Sitzwechsel, ein-und beidbeinig.*)

FIG. 16. — “*To Hang by one Arm.*” The most difficult way is to raise the body up by one arm to the position described. (*Handhang mit gebeugtem Arm.*)

FIG. 17. — “*Suspension by the Hands and Feet.*” (*Schwimmbang.*)

FIG. 18.* — “*To raise the Body with the Arms slowly over the Bar.*” Head back and body forming an arc. (*Kreuzaufzug.*)

FIG. 19. — Hold the body in a horizontal position by balancing on the back. (*Liege holmqueer.*)

Fig. 14.



Fig. 15.



Fig. 17.

Fig. 16.

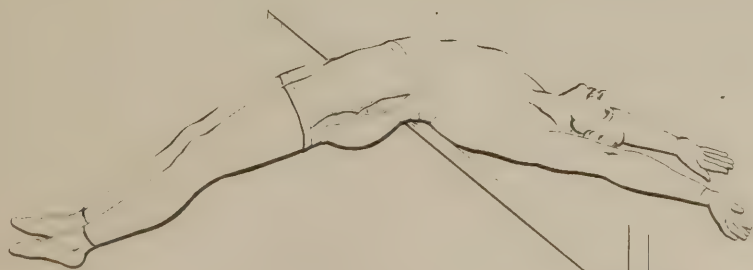
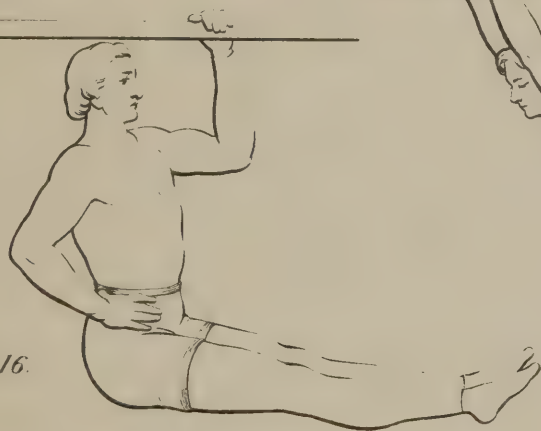


Fig. 19



Fig. 18.



FIG. 20.— Hold the body in a horizontal position by resting it on the elbows. (*Wage auf beiden Armen.*)

FIG. 21.— Raise the body up slowly from position *a* to a vertical position (*b*). (*Armstand.*)

FIG. 22.— “To Hang by the Knees.” (*Kniehang.*)

FIG. 23.— Hang by the knees, swing the arms up backward, take hold of the feet and bend the body into position shown in the plate. (*Kniehang mit Festhalten der Fussspitzen.*)

FIG. 24.— Is done in the same manner as the preceding, except with only one knee and one hand.

FIG. 25.*— This feat consists in raising the body from position *a* to *b*. To be rightly performed the body must be brought over the bar with a perfectly simultaneous motion of the arms, and not sidewise. (*Aufstemmen aus dem Hang, langsam.*)

[Pl. 27.]

FIG. 26.* — “*To get on the Bar with one Arm.*” The swinging of the free leg backward (*a*), combined with a straightening of the arm, brings the body up to position *b*. (*Aufschwung mit einem Arm, vor-und ruckwaerts.*)

FIG. 27. — Hang by the knee and change from one leg to the other. (*Wechselhang in einem Knie.*)

FIG. 28. — Hang by the right knee, press the point of the left foot under the bar, and with the left hand take hold of the right foot, then let the body down as far as possible and raise up again. The whole body must be kept under and on a line with the bar. (*Wage aus dem Knichang in einem Knie.*)

FIG. 29. — To be executed like Fig. 28, but without the aid of the hands.

FIG. 30. — “*To drop to the Ground back of the Bar.*” First swing as high as possible (*a*), then as the body swings backward bend the legs down, and letting go the hands (*b*) drop lightly to the ground on the toes. (*Absprung im Schwung ruckwaerts.*)

Fig. 27.

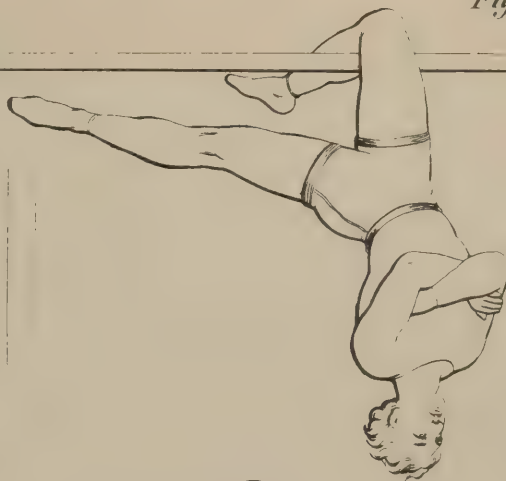


Fig. 26.



Fig. 29.

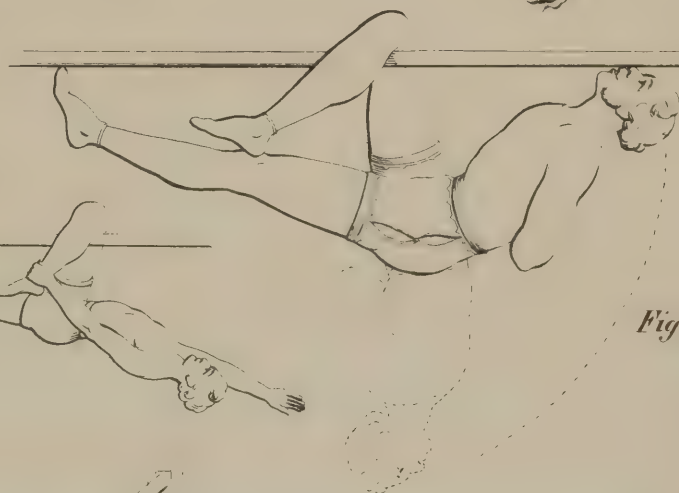


Fig. 28.

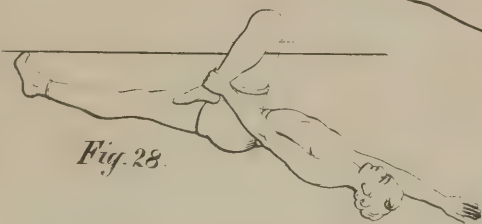


Fig. 30.

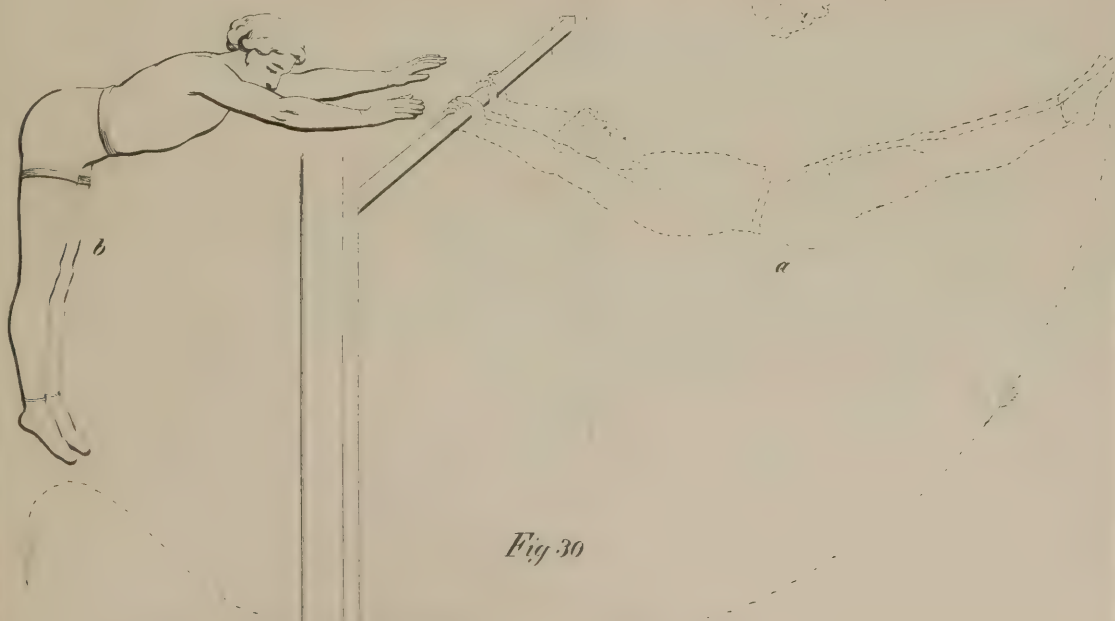


Fig. 31

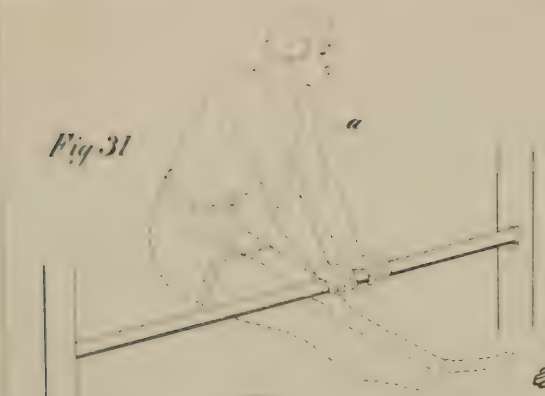


Fig. 33

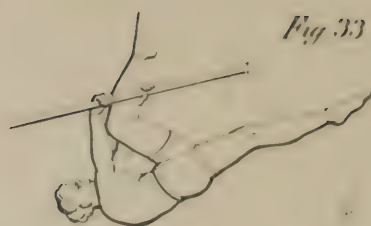


Fig. 32



Fig. 34



FIG. 31.* — “*The Forward Jump under the Bar.*” Throw the body backward, and raise the legs so that the feet nearly touch the bar (*a*), and by a strong impulse throw the body forward and under the bar and drop to the ground in the manner shown in *b*. (*Absprung aus dem Stuetz vorwaerts.*)

FIG. 32. — “*To swing up on the Bar with the aid of one Leg.*” Swing forward, and at the moment the body is extended horizontally and at arm’s length, throw the head back and raise the leg (*a*). The return swing, aided by the arms, will bring the body up to position *b*. (*Knieaufschwung seitwaerts.*)

FIG. 33. — Is exactly like the preceding, except that you pass the leg between the arms instead of outside, or on the one side of them. (*Knieaufschwung zwischen den Armen.*)

FIG. 34. — Swing backward as high as possible, and at the culminating point of the swing take the hands from the bar and clap them together, catching the bar again in time for the return. (*Klatsch-schwung.*)

[Pl. 29.]

FIG. 35.—Seize the bar with both hands, raise one leg, and place the instep of the foot on and outside of the bar *a*. From this position an effort of the arms, aided by a swing, will bring the body into position *b*. (*Aufschwung durch Ristanlegen ausserhalb.*)

FIG. 36.—This feat bears the euphonious title of “Skinning the Cat.” Take a swing, and when your legs are extended forward (*a*), pass them rapidly through the arms (*b*), and over the bar (*c*). From that position you can jump down, or let go the hands, and catching the bar with the arms, swing the body entirely round it a number of times. (*Kreuzaufschwung.*)

FIG. 37.—“*The Tilt.*” Take a swing (*a*), raise your feet up to the bar, keeping the legs straight (*b*), and with a strong effort of the arms, aided by a corresponding motion of the legs, raise the body quickly on the bar (*c*). (*Die Kippe.*)

FIG. 38.—Is executed in the same manner as the preceding, except with the legs spread apart.

FIG. 39.—Take a strong swing so that you will be able to raise up on to the bar without bending the arms. (*Stemmschwung.*)

Fig. 36.

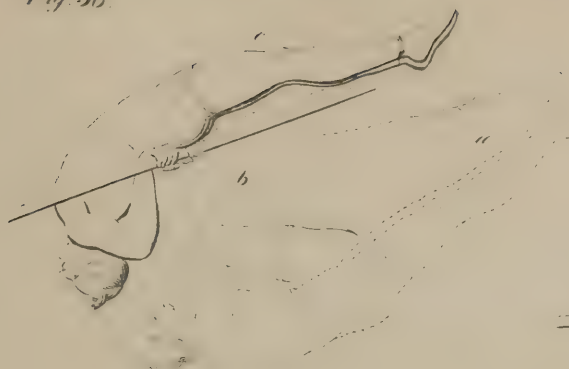


Fig. 35.



Fig. 38.



Fig. 37.



Fig. 39.



Fig 41



Fig 44



Fig 43



Fig 42



Fig 40



FIG. 40.—“*To Swing round the Bar backward, holding it with the Hands and one Leg.*” Can also be executed forward, but the hands must then grasp the bar with the palms turned *from* the body. (*Muehle in einem Knie.*)

FIG. 41.—“*To Swing up.*” This must be done very quickly. Seize the bar with both hands, throw the legs toward the bar, the left outside and the right inside (*a*), and by a vigorous effort of the body and arms swing the left leg and body forward over the bar, so that you will sit on it in position *b*. (*Muehlaufschwung.*)

FIG. 42.—This feat consists in raising the body quickly from position *a* to position *b*, without bending the arms and without the aid of a swing. First throw the upper part of the body forward so as to distend the chest, and then with an *exertion* of the arms raise the body at the same instant that it receives the backward impulse given to it by throwing forward the chest and shoulders. (*Wippstuetz, Auf-, Unter-, oder Zwiagriff's.*)

FIG. 43.—Take a strong swing, and at the instant that the body is extended forward (*a*), throw the legs rapidly under the bar (*b*), so that the backward swing will bring you into a sitting position on the bar (*c*). From that position swing backward entirely round the bar, holding it with both hands and under the knees, or jump off forward to the ground. (*Sitzaufschwung.*)

FIG. 44.—Take a spring from the ground, seize the bar, and throw the body over it backward and outside the hands, letting go the right hand when the body is completely over, and catching with the arms; or letting go both hands and jumping to the ground. (*Kreuzaufschwung seitwaerts.*)

FIG. 45. — “*The Arm-Mill.*” *a* Shows the start, which is taken from a sitting position on the bar (*b*), and *c* shows the position of the body and arms while going round. The arms must be held firmly to the side and the hands firmly to the breast, the latter well distended, and with the legs straight. The Arm-Mill can also be executed forward. (*Armuelle, vor-und rucklings.*)

FIG. 46. — Like the preceding, except that one arm is extended sidewise along the bar during the performance of the feat.

FIG. 47. — “*The T Mill.*” Same as the two preceding, except with both arms extended. (*Christus-Welle.*)

FIG. 48. — “*The Back-Mill.*” Being seated on the bar, jump forward (*a*), and go round in that position (*b*). The middle of the back must be kept close to the bar. (*Kreuzwelle.*)

FIG. 49. — “*The Shank-Mill.*” As shown, particular attention must be paid in this exercise to keep the legs and arms perfectly straight. Can also be done backward, but then the hands must be turned the other way. (*Reitwelle.*)

Fig. 49



Fig. 45



Fig. 46



Fig. 47



Fig. 48

Fig 50



Fig 55



Fig 53



Fig 52



Fig 56



Fig 51



Fig 54



FIGS. 50, 51, 52, 53, and 54.—Show the different ways of going round upon the bar, forward and backward, with the aid of both legs. Keep in mind that always when going round forward the hands must “undergrasp” the bar; that is to say, the thumbs above the bar and the palms of the hands turned *from* the body. In going round backward the “uppergrasp” must be used. Experienced gymnasts can also do it with one hand off from the bar. (*Sitzwellen, vor-und rueckwaerts.*)

FIG. 55.—“*The Wheel.*” A continual turning round the bar without touching it with the body, the body and arms to be kept perfectly straight. (*Bauchwelle rueckwaerts.*)

FIG. 56.—“*Going round Forward.*” The illustration shows how to start. Raise the body up so that the knees will be pressed firmly on the bar, then throw the body over forward, at the same time extending it straight out at arm’s length, and with an effort of the arms as the body swings round, come up again on the other side of the bar to the first position. The arms must be kept straight. (*Felge vorwaerts.*)

[Pl. 33.]

FIG. 57.— Jump up, seize the bar with both hands (*a*), raise the legs (*b*) and throw the body over it without touching (*c*), then let go the hands and jump on the ground a few steps from the bar. (*Freie Felge.*)

FIG. 58.— “*The Turnspit.*” Bring the breast firmly to the bar, hook the left foot on it, and by a strong swing of the free leg go round in that position. Both legs must be kept perfectly straight. (*Der Bratenwender.*)

FIG. 59.— Like Fig. 58, except to hold the bar with only one hand.

FIGS. 60, 61, and 62.— “*The Riding Mill.*” Show the different ways of going round the bar while seated astride it. One only or both hands may be used. (*Reitwellen.*)

Fig. 57.



b

a

Fig. 61.



Fig. 60.



Fig. 58.

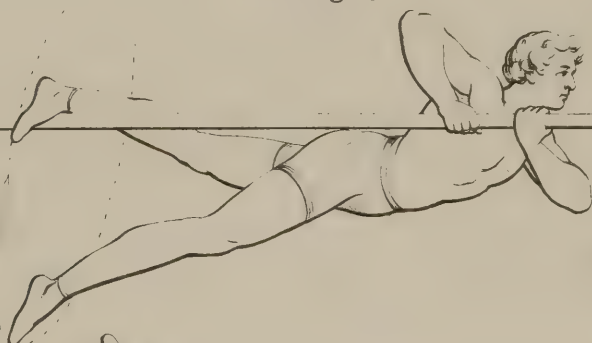


Fig. 62.



Fig. 59.

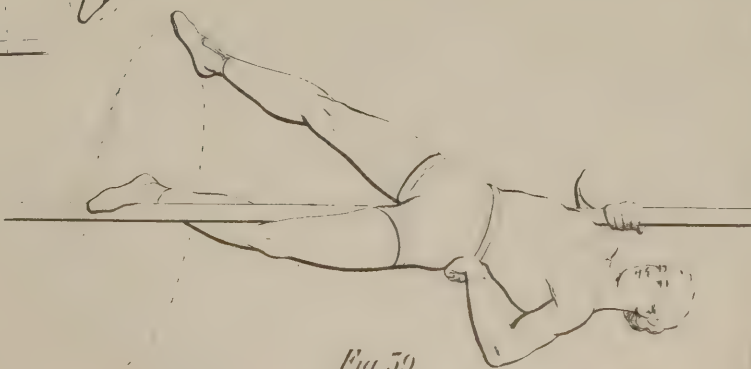




Fig 63

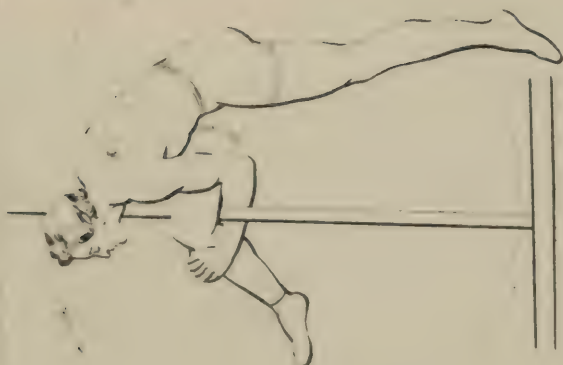


Fig 64



Fig 65



Fig 67



Fig 66



Fig 68



Fig 69

FIGS. 63, 64, 65, 66, and 67.—“*The Tumbling Mill.*” Show how to go round the bar, holding it under one or both knees, but without taking hold of it with the hands. Can be done forward or backward. (*Burzelwellen, vor-und rueckwaerts.*)

FIG. 68.—Raise the body up, hook the feet under the bar, and throw yourself over forward, so as to come up again on the other side. (*Ristwelle.*)

FIG. 69.—Like Fig. 68, except with but one foot, which must be hooked on the bar between the arms. (*Ristwelle mit einem Bein.*)

[PL. 35.]

FIGS. 70 and 71.—“*The Spoke.*” A continual turning round the bar forward while resting on the upper part of the arms. (*Die Speiche.*)

FIG. 72.—A continual turning round forward and backward, while resting on the stomach, and holding the thighs with the hands. (*Bauchfelge, vor-und ruckwaerts.*)

FIG. 73.—Being suspended by the legs, swing as high as you can (*a*), and when the body has swung back to about the same height in the opposite direction, unhook the legs from the bar and jump to the ground (*b*). (*Knieabsprung.*)

FIG. 74.—Sitting on the bar and holding out the arms (*a*), let the body swing down backward, so as to hang by the legs (*b*). This feat requires a great deal of strength in the legs and confidence in the performer. (*Kniefall.*)

FIG. 75.*—“*The Vault.*” Give to the body an impulse from left to right, or from right to left, pass it over the bar, and jump to the ground; legs straight and together. (*Uebersprung seitwaerts.*)

Fig. 70.



Fig. 72.



Fig. 71.

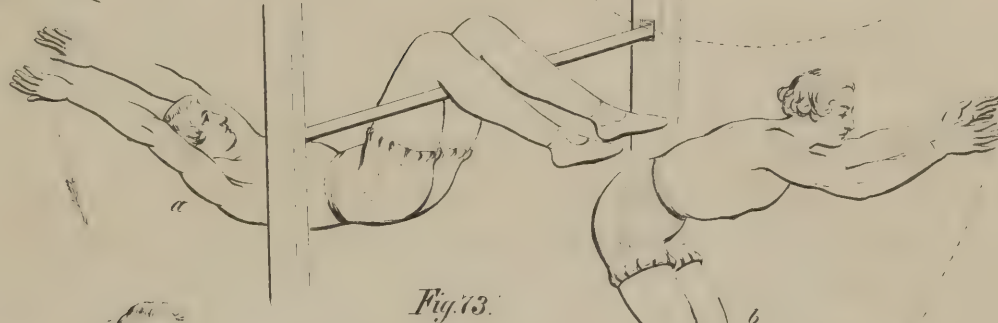


Fig. 73.



Fig. 74.



Fig. 75.

Fig 76



Fig 77



Fig 79



Fig 78



Fig 80

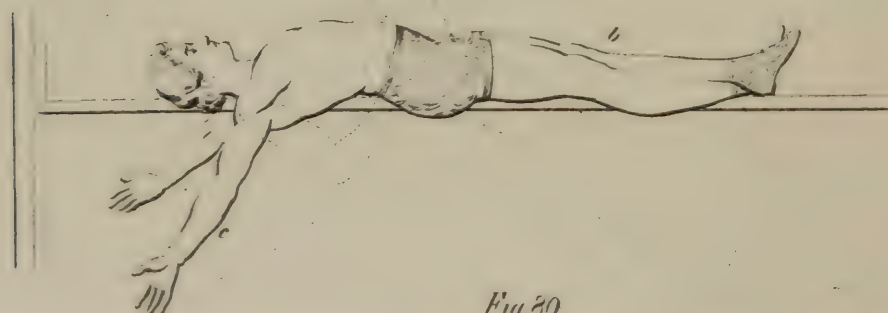


FIG. 76.—“*To pass the Legs between the Arms.*” (*a, b, c.*) Gather up the legs as much as possible, in order to pass them without touching the bar; when they are fairly over let go the hands and jump to the ground. (*Durchhock-Absprung.*)

FIG. 77.—“*To Jump over the Bar outside of the Hands.*” Same as before, except that the legs are spread so as to pass over the bar on each side of the arms instead of between them. (*Graetschabsprung.*)

FIG. 78.*—“*To stand erect upon the Bar on one Foot.*” Put the leg on the bar between the hand (*a*), then let go the hands and raise the body quickly (*b*); eyes looking to the ground and arms straight out. (*Reckstehen auf einem Bein.*)

FIG. 79.*—“*To stand erect upon the Bar on both Feet.*” From position *a* jump up on to the bar with the feet outside the arms (*b*), then raise the body (*c*). (*Reckstehen.*)

FIG. 80.—“*To Lie down on the Bar.*” As shown by *a, b*, and *c*; must be done very slowly. (*Liege holmlaengs.*)

[PL. 37.]

FIG. 81.—“*The Forward Balance.*” Hold the body in a horizontal position, as in the plate. (*Wage vorlings.*)

FIG. 82.—“*The Backward Balance.*” Bending one leg will make the exercise less difficult.

FIG. 83.—“*The Backward Balance with both Legs extended.*” Raise the legs to the bar, and then lower them slowly into a horizontal line with the body; remaining in that position as long as possible without straining. This, if properly done, is one of the most difficult of the exercises. (*Wage ruecklings.*)

FIG. 84.—“*To balance the Body upon one Arm.*” Hold the body in the position described, and slowly turn from left to right, or from right to left, so as to describe a half circle. The body must be kept perfectly parallel with the bar. (*Wage auf einem Arm.*)

FIG. 85.—“*To Hang by the Toes.*” Practice will enable the performer to sustain himself with but one foot; the right or the left. (*Risthang, ein- und beidbeinig.*)

FIG. 86.—“*To Hang by the Neck.*” The body must be bent forward so as to form a curve. (*Knickhang.*)

FIG. 87.—“*To Hang by the Heels.*” (*Fersenhang.*)

FIG. 88.—Being supported by the right arm (*a*), put your left behind you on the outside of the bar, then lower the body without bending the legs (*b*), pass under the bar, and with a strong effort of the left arm and wrist, raise your body up on the other side to position *c*. Return in the same manner. (*Stuetzwechsel aus der Wage.*)

Fig 87



Fig 81



Fig. 88.



Fig 82

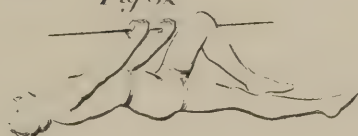


Fig 83



Fig. 86



Fig 85

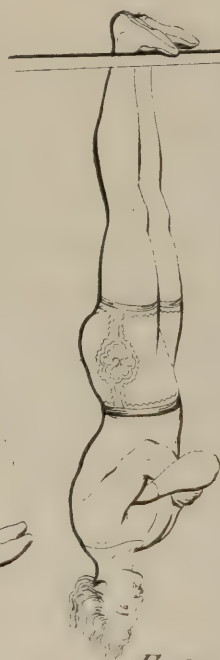


Fig. 84



Fig. 89

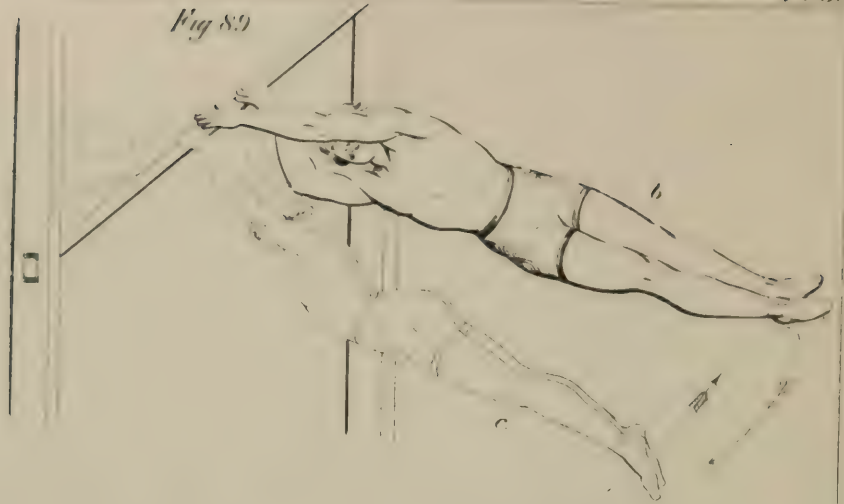


Fig. 90



Fig. 91



FIG. 89.—“*To change the Grasp by the aid of a Swing.*” Take a good swing (*a*), turn round quickly (*b*), and catch the bar on the other side in time for the return swing (*c*). Repeat the exercise when at position *a*, on the return swing. (*Hangwechsel im Schwung.*)

FIG. 90.—Swing round the bar while holding it with one knee, and without the aid of the hands. (*Stechschwungwelle mit Fanghang vor-und rueckwaerts.*)

FIG. 91.—“*The Giant Swing.*” Consists in swinging round the bar at arm's length, describing a complete circle. Position *a* shows the “start.” Care must be taken that the grasp does not slip. (*Riesenschwung, vorwaerts.*)

FIG. 92.—“*The Giant Swing Backward.*” Throw the legs up and straighten the arms and body into position *a*, from which position the body will swing down and round to the opposite side with such force that a slight exertion only of the arms will be necessary to bring it up on the bar. (*Riesenschwung, rueckwaerts.*)

FIG. 93.—A continual swinging round, while holding the bar under both knees, and without the aid of the hands. Confidence, care, and quickness of motion are all that are required for a successful performance of this feat. (*Freie Kniewelle.*)

FIG. 94.—Jump toward and catch hold of the bar with one hand, at the same time seizing the wrist with the other (*a*), raise the legs (*b*), and throw the body over the bar without touching it (*c*). (*Felge mit einer Hand.*)

FIG. 95.*—“*The Staff Suspension.*” The weight of the body must hang on the arm the nearest to the bar, the other presses the staff upward and prevents it from slipping off. (*Stab-Wagehang.*)

[Pl. 40.]



Fig. 95



Fig. 94



Fig. 92

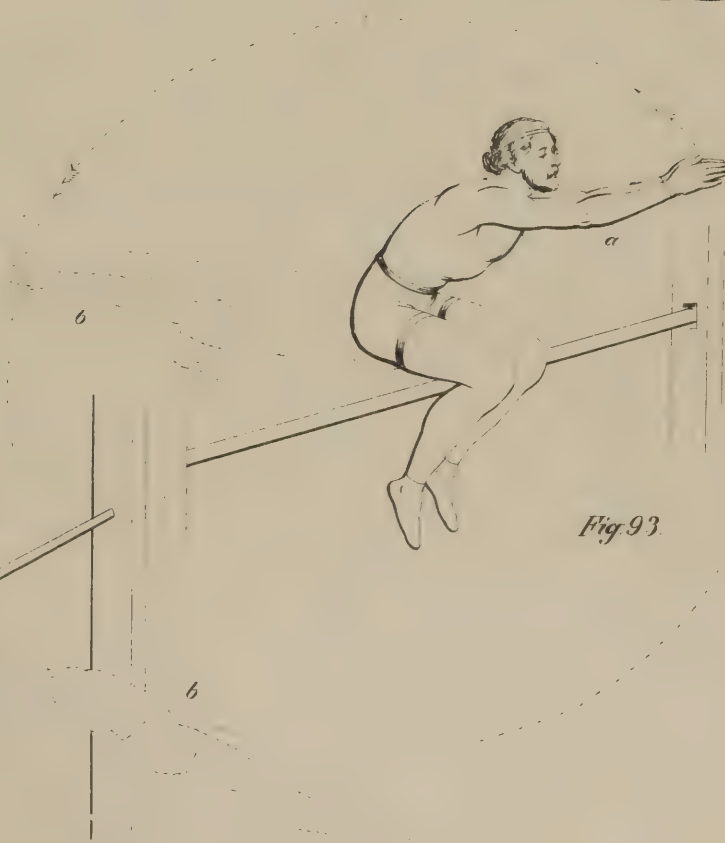


Fig. 93

Fig 96

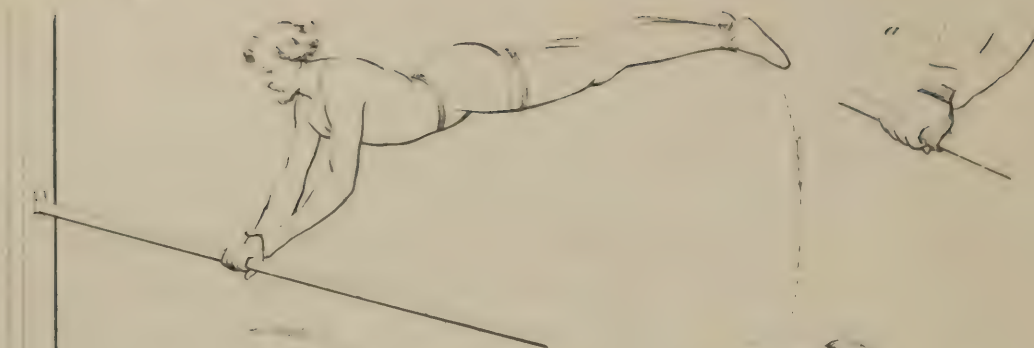


Fig 99



Fig 98

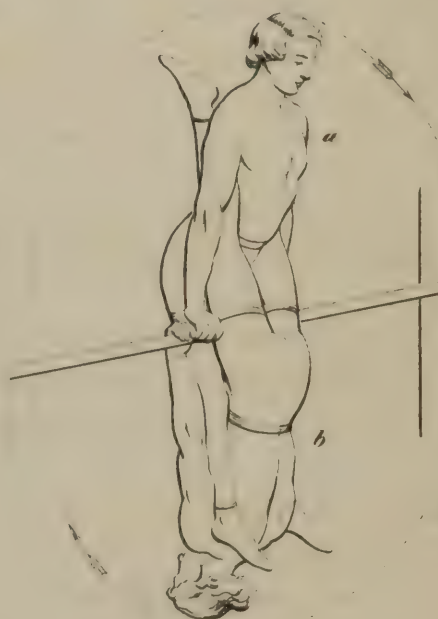


Fig 100

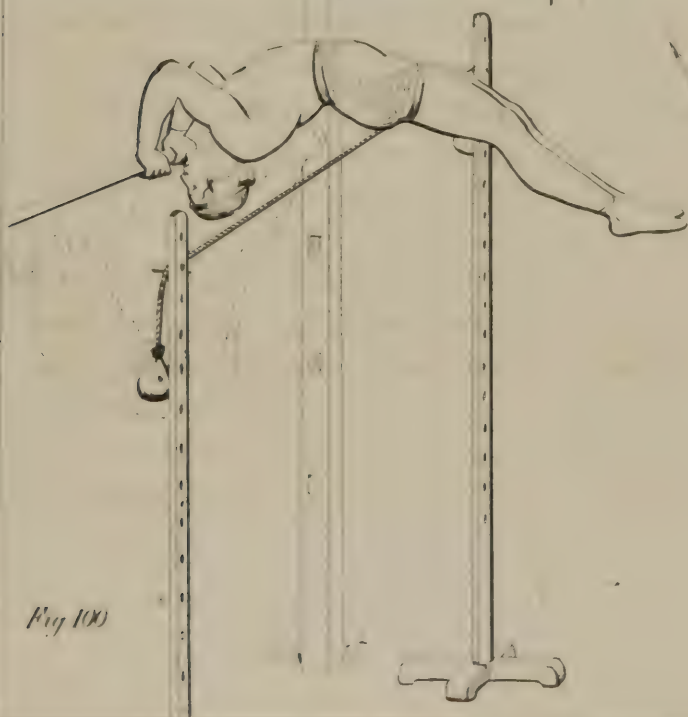


Fig 97



FIG. 96.—“*The Giant Swing with one Hand.*” The start is the same as at Fig. 91, except that you let go the hold of the left hand, and grasp with it the wrist of the right. This, however, is a very dangerous exercise. When first practicing this feat a leather strap which is fastened on the bar, and through which you pass the wrist of the right hand, should be used. See *a*. (*Riesenschwung mit einer Hand.*)

FIG. 97.—A continual going round the bar in the position described in the plate. (*Der Muthsturz.*)

FIG. 98.—“*The Double Mill.*” Go round upon the bar in the positions described in the plate; the arms and body must be kept perfectly straight; *a* goes up first. (*Die Doppelmuehle.*)

FIG. 99.—“*To go round upon the Bar while holding it under the Knees and with the Hands.*” Is executed by two gymnasts; can also be executed, by experienced gymnasts, without the aid of the hands. In this, as well as in the exercise described in Fig. 98, the gymnasts should be of the same size and weight. (*Die Schaukel.*)

FIG. 100.—“*Jumping over the Rope.*” As seen in plate. The best start is obtained by jumping toward the bar before grasping it. The space from the rope to the bar should be two feet; the former should be so placed as to slip off easily from the pegs *toward* the bar when touched by the body, whether while going over or in consequence of not relinquishing the grasp of the hands at the proper moment. (*Unterschwung ueber die Springschnur.*)

The Rings.

SWINGING EXERCISES.

FIG. 1.* — Shows how to “swing in the rings.” When the body swings forward raise the legs up without bending them, and at the instant the body commences to swing back extend it forcibly out, in order to increase the motion of swinging. After the body has passed the center, on the backward swing, raise it slightly with the arms. Do not kick with the legs, but keep them straight. (*Hochschwingen.*)

FIG. 2.* — “*To Jump to the Ground on the Backward Spring.*” When you swing backward, raise the body with the arms (*b*), and letting go your hold drop to the ground on the points of your toes (*c*). (*Absprung nach hinten.*)

FIG. 3. — “*To get into the Rings, with straight Arms, at the Backward Swing.*” Care should be taken to keep the rings close to the body. The motion of “getting into the rings,” as it is called, is hard to describe; sufficient strength, confidence, and an observance of the above caution, will insure success and prevent accidents. (*Einstemmen ruckwaerts.*)

Fig. 1.

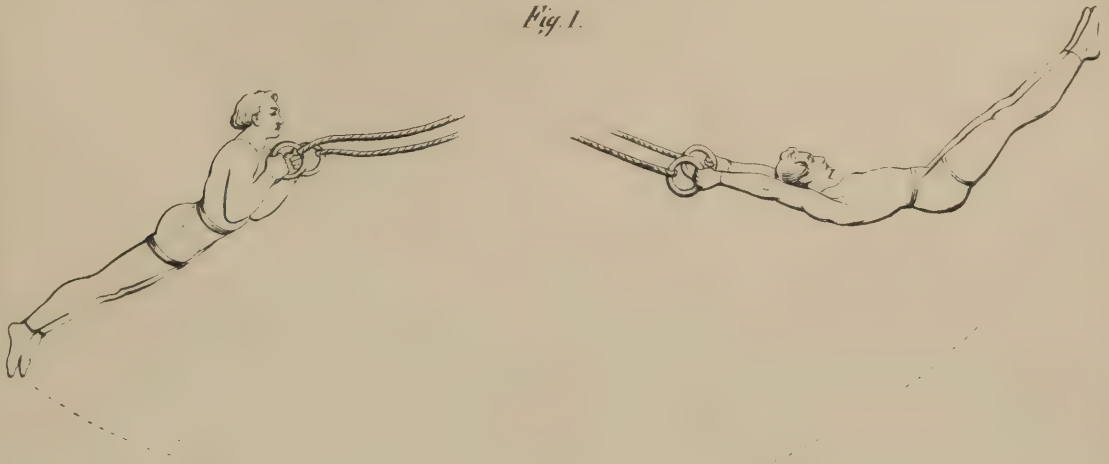


Fig. 2.



Fig. 3.

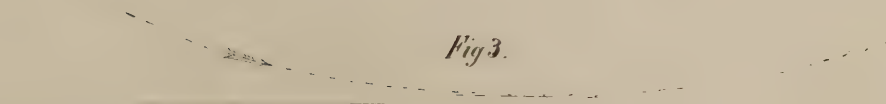




Fig. 4

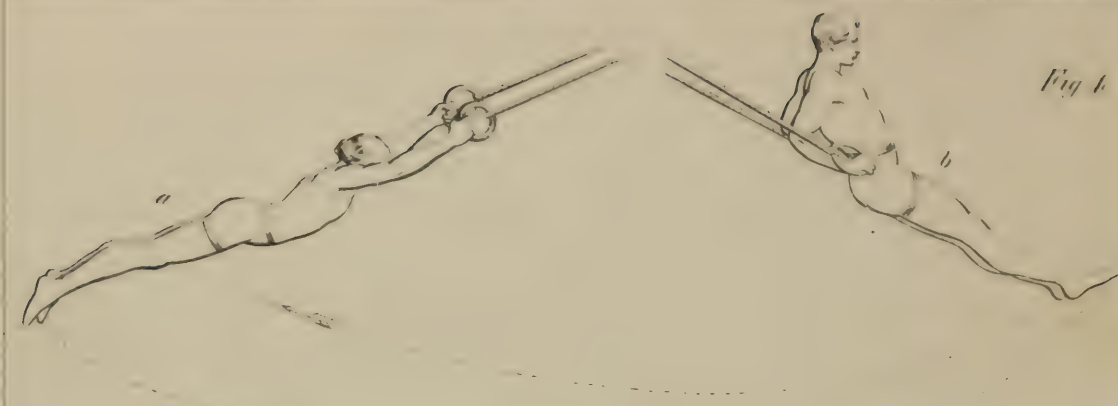


Fig. 5

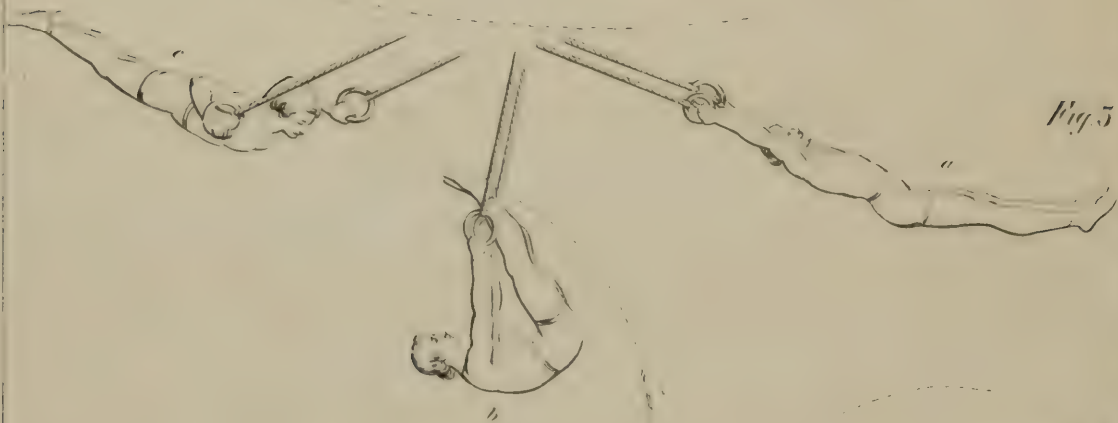


Fig. 6

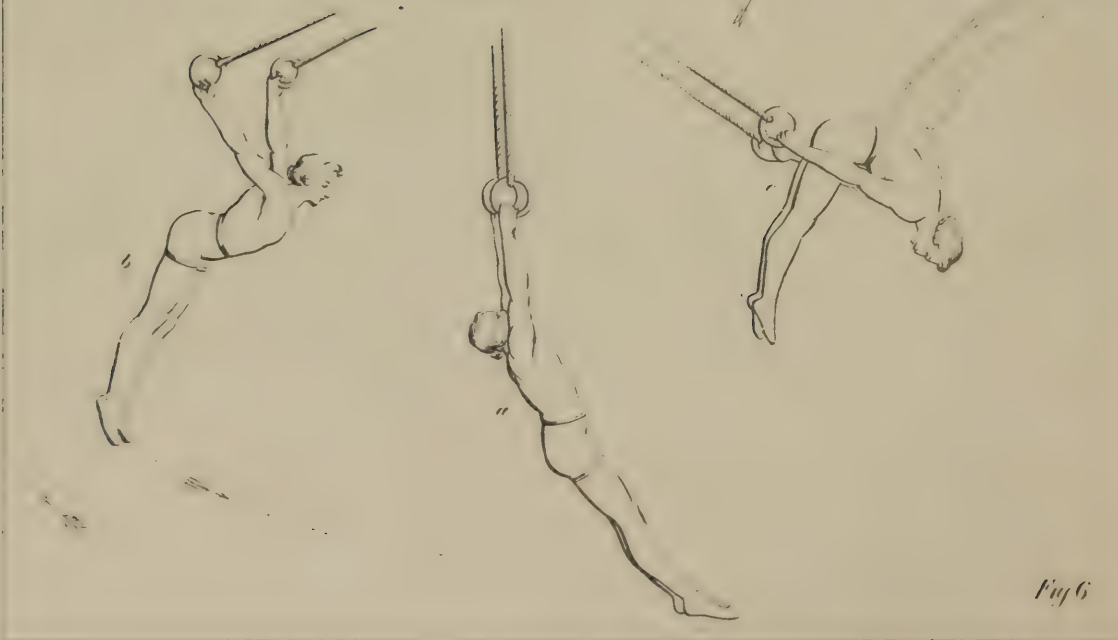


FIG. 4. — “*To get into the Rings at the Forward Swing.*” (*Einstemmen nach vornen.*)

FIG. 5. — “*To Turn in the Socket Backward.*” Take a swing (*a*), and when in the center raise the legs (*b*), and turn out (*c*). When making the turn (*c*) the arms should be spread wide apart. (*Ausrenken rueckwaerts.*)

FIG. 6. — From position *a* swing backward and with a quick spreading apart of the arms and throwing forward of the body bring it into position *b*, and remaining in this position while on the return swing; then, when well forward, the body is raised as shown at *c*, and thrown over as in *d* in time for the return swing backward. (*Einrenken rueckwaerts.*)

[PL. 43.]

FIG. 7. — Swing forward (*a*), raise the legs quickly outside of the arms (*b*), let go with the hands and jump to the ground (*c*). (*Abgraetschen vorwaerts.*)

STATIONARY EXERCISES.

FIG. 8.* — Raise the legs above your head (*a*) and turn the body over (*b*); returning in the same manner. The legs must be kept straight. (*Ueberheben.*)

FIG. 9.* — Raise the legs (*a*) and let them drop down again at the same instant that the body is raised quickly into the rings (*b*). (*Aufkippen und Kippumschwung.*)

FIG. 10.* — “*To raise the Body slowly into the Rings.*” Do not let the rings spread apart; keep them close to the body. (*Einstemmen.*)

FIG. 11. — Seize one ring with both hands, hook the point of your foot in the other, and raise the body up. (*Fusshaltstemmen.*)

FIG. 12. — “*To Balance the Body over one Arm.*” Pass the legs over the head to the other side and place the back against the right arm (*a*), and when the weight is equal on both sides let go the left arm and balance the body in position *b*. (*Wage ueber einem Arm.*)



Fig. 7.

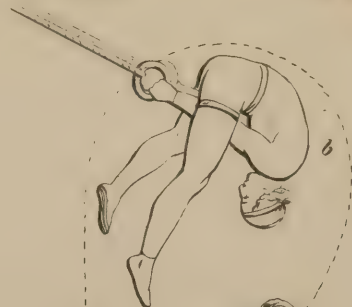


Fig. 9.



Fig. 10.



Fig. 8.



Fig. 11.



Fig. 12.

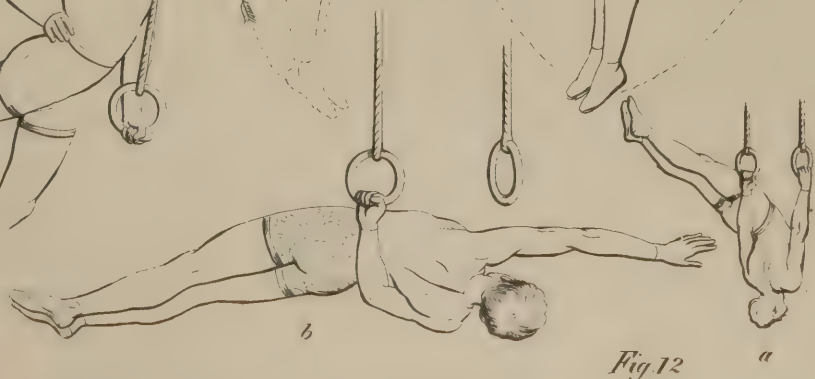


Fig 14



Fig 15



Fig 13

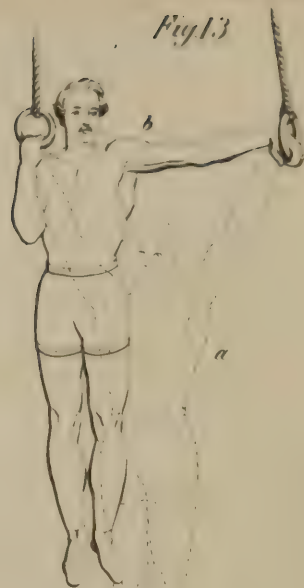


Fig 17

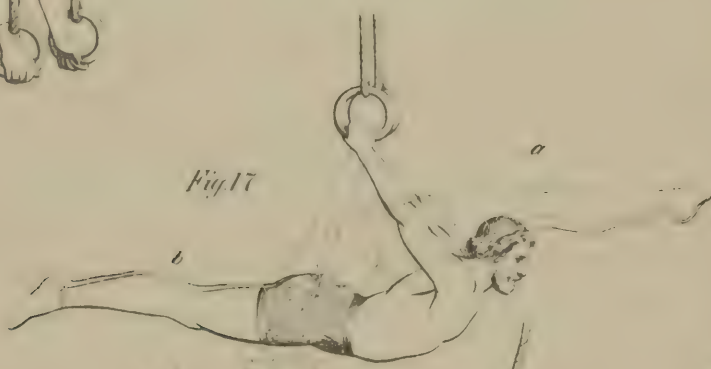


Fig 19

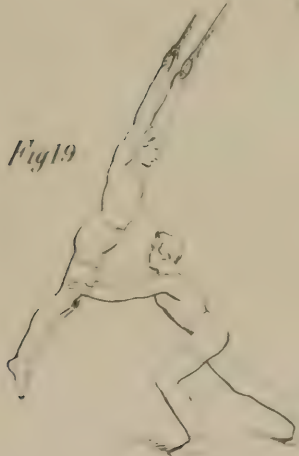


Fig 18

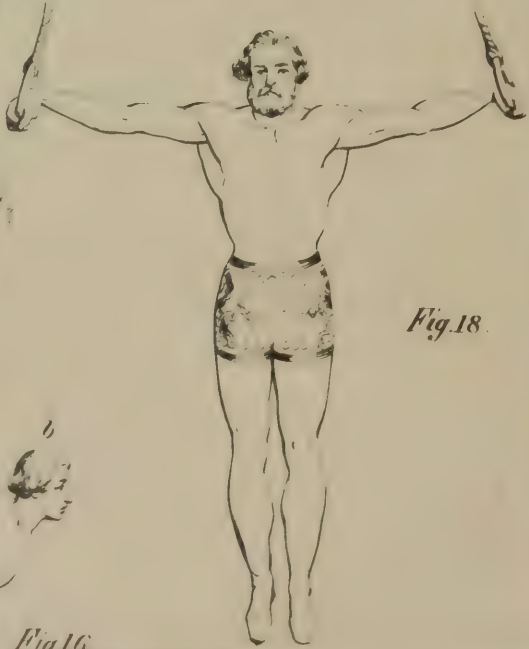


Fig 16



FIG. 13.*—Being suspended in the rings, raise yourself up with one arm, keeping the other perfectly straight, then drop down again and repeat the exercise with the other arm. (*Armabstrecken, wechselhaendig.*)

FIG. 14.—Raise the legs slowly above the head, hook the insteps on the rope, then raise your body up by straightening the arms, to the position shown in the plate. (*Handstand.*)

FIG. 15.*—Hang by one arm and raise the body up, so that you touch the ring with your mouth. This feat, when done slowly, requires a great deal of strength in the arm. (*Ziechklimmen an einem Arm.*)

FIG. 16.—“*The Forward Scale.*” Drop down slowly from an erect position in the rings to a horizontal one and without bending the arms or body. (*Wage aus dem Streckstuetz.*)

FIG. 17.—Turn over from the “Backward Scale” into the forward one, then back again to the first position without bending the body. (*Wage-Ueberheben, vor-und rueckwaerts.*)

FIG. 18.—Being in the rings, spread the arms slowly from the body, and drop it slowly down at the same time until the arms are at right angle with it. This is one of the most difficult and at the same time dangerous exercises in the rings; a little carelessness might easily result in a dislocation of the arms or shoulders. (*Armausbreiten.*)

[Pl. 45.]

Construction of Pyramids.

[The leader has first to divide the pupils according to their size and weight, then to designate which place they are to occupy, so that at the command "Fall In," all the pupils required for the pyramid will step forward, forming a half circle. The next command is "First Story take Position." The first story requires the tallest and heaviest men: every thing depending on the foundation. The pupils for the second story will then step behind the men on which they are to mount, and wait for their orders. At the command "Second Story, Mount," each one places his hands on the shoulders and his right foot on the haunch of his comrade of the first story, and then steps lightly and quickly on to his shoulders. The third and fourth stories mount in the same manner as those below. That the pupils for the fourth story should be of very light weight will readily be understood. Those forming the upper stories should wear strong leather belts. In descending, the same order of proceeding, and an implicit obedience to the commands of the leader, must be observed to prevent accidents.]

FIG. 1. — "*The Conical Pyramid.*" Supported by one; *a* and *b* jump up and hook their feet together behind the neck of the man standing in the center; *c* and *d* mount simultaneously, as shown in plate, either from the ground or from a high table. The little boy for the top should be lifted up by another person. (*Genick-Wage.*)

FIG. 2. — "*Suspension Pyramid.*" *a* and *b* stand on stools about two feet high, on each side of the man in the center; *c* goes up first, and then the one in the center puts his hands under *a* and *b*'s arms and steps forward, removing *a* and *b* from their supports and holding them suspended as shown. (*Stemmhang-Pyramide.*)

[Pl. 46.]

Fig. 2

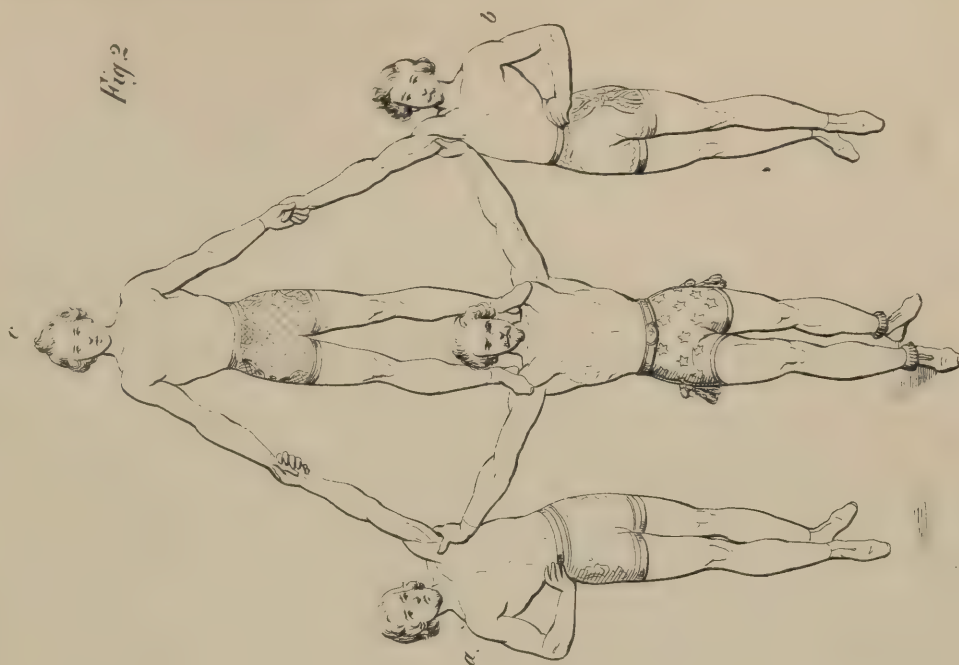
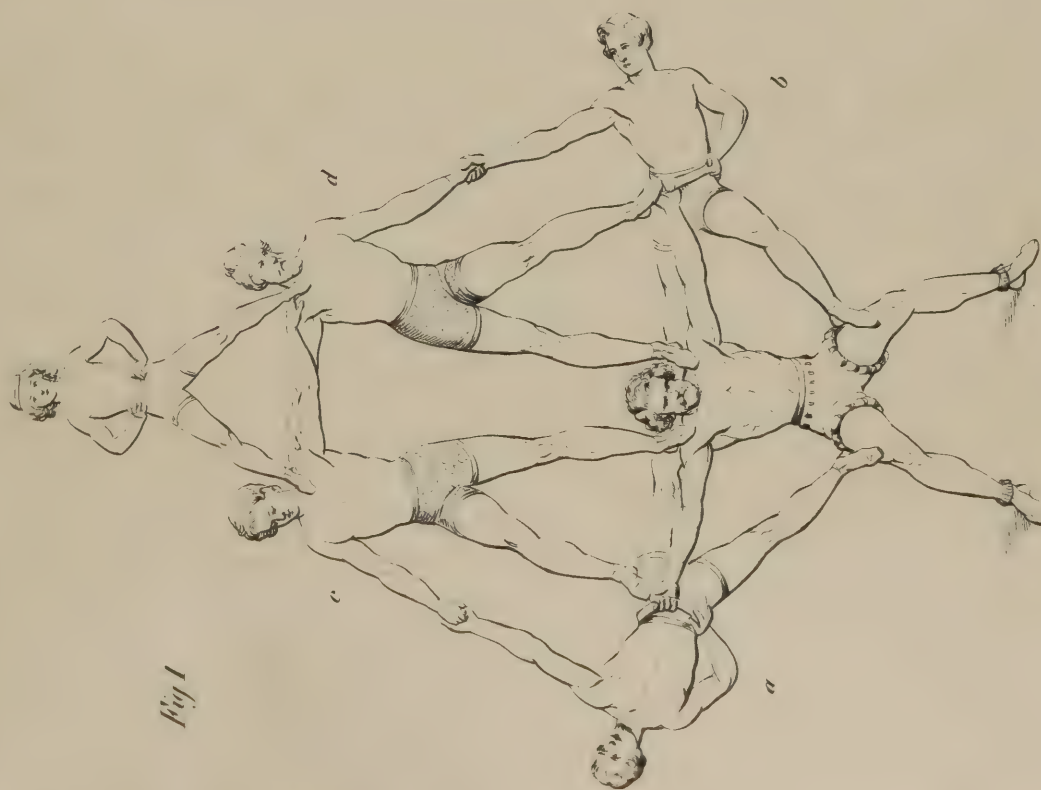
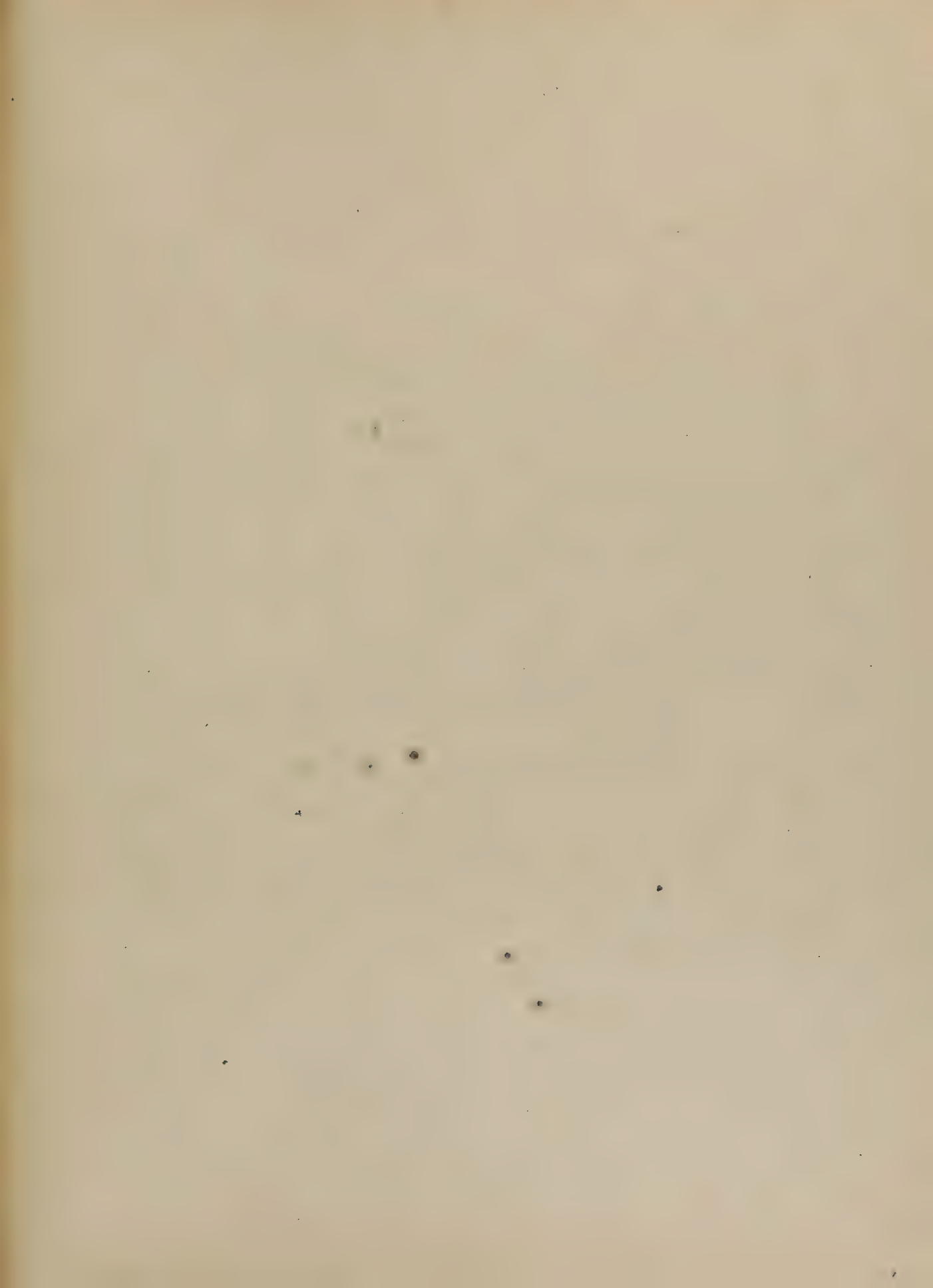


Fig. 1





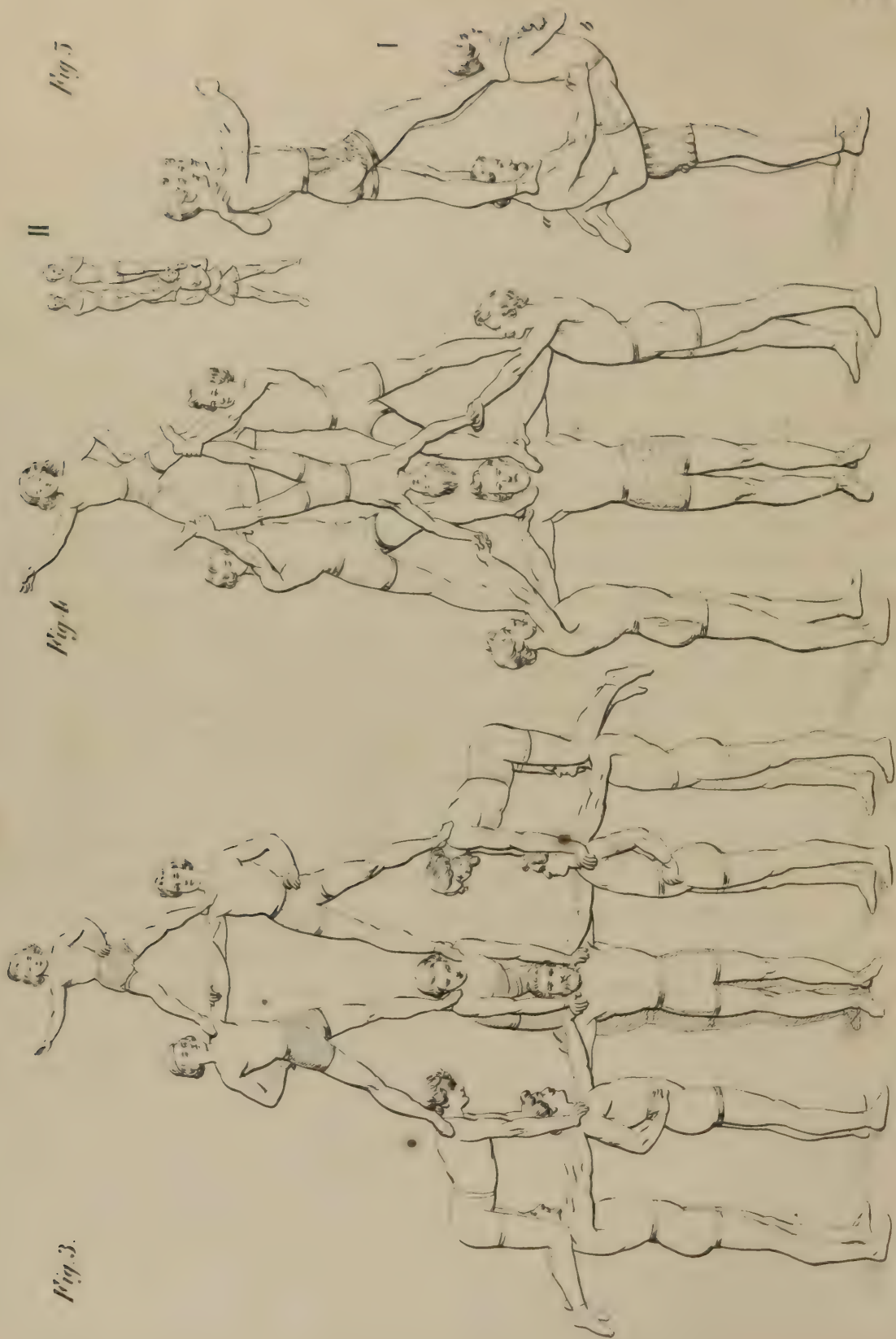


Fig. 3.

Fig. 4.

Fig. 5.

FIG. 3.—“*The Pedestal Pyramid.*” This pyramid is distinctly enough explained by the drawing in the plate. (*Knie-Liege-Stuetz-Pyramide.*)

FIG. 4.—“*The Handstand Pyramid.*” The first and second stories being formed in the manner already described, the boy, forming what is called the “Handstand,” attains his position by placing his hands on those of the performers at the sides of the first story, and with a quick and energetic spring throwing his legs up high enough to be caught by the second story performers, and at the same instant straightening his arms and body. It will be seen that the one forming this part of the pyramid should be aided as much as possible by the others. The little boy on top has to be lifted up afterward by an assistant. (*Handstand-Pyramide.*)

FIG. 5.—“*The Hookhold Pyramid.*” *I* is the side view; *II* the front; *a* takes hold of *b*'s belt, *b* jumps up and catches with the legs round *a*'s body. The second story mounts with the aid of other persons, or by stepping on *a*'s shoulder from a table or other high object; the two forming the second and top stories should mount simultaneously. (*Halthang-Pyramide.*)

[PL. 47.]

FIG. 6.—“*The Doublestand Pyramid.*” *a* takes hold of *b*'s hands, *b* jumps up so that *c* can catch his legs, and is then raised up by *a* and *c*; *d* attains his position by the assistance of others. (*Doppelstand-Pyramide.*)

FIG. 7.—“*The Harlequin Pyramid.*” This pyramid does not need any explanation; it is shown distinctly enough in the plate. (*Kreuzstand-Pyramide.*)

[PL. 48.]



Fig 6

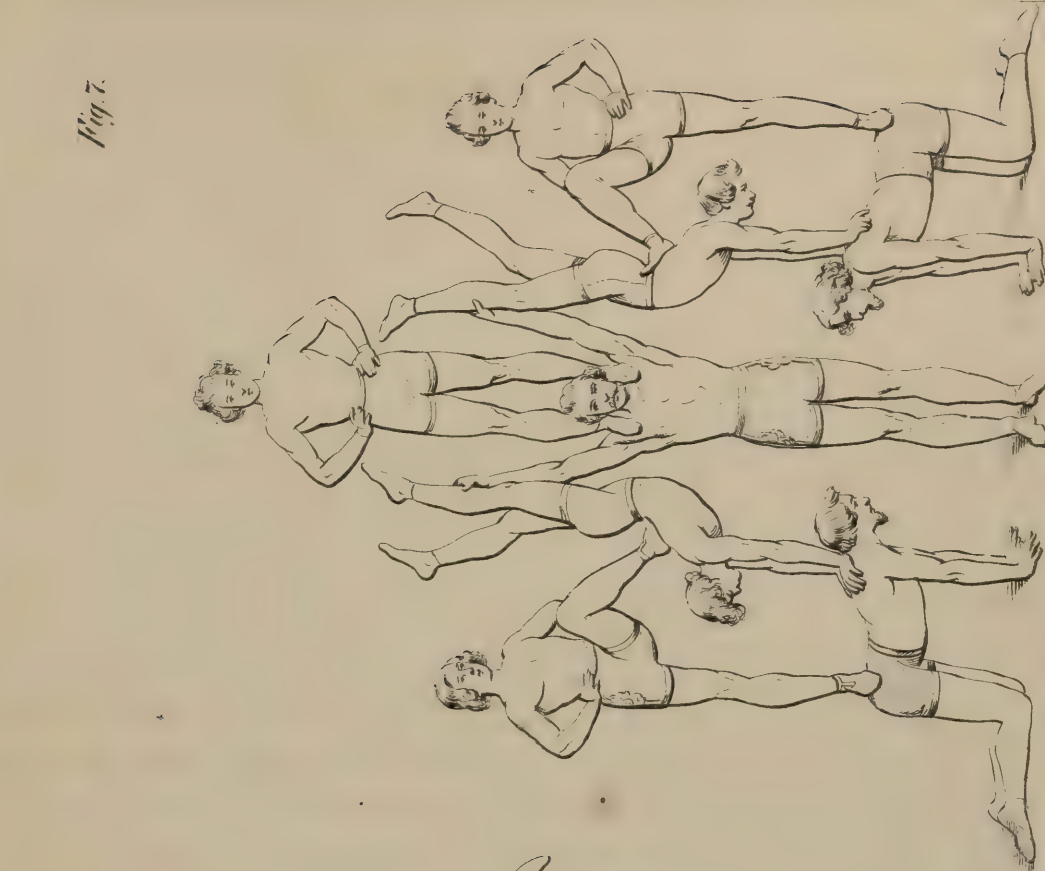


Fig 7



Fig 8

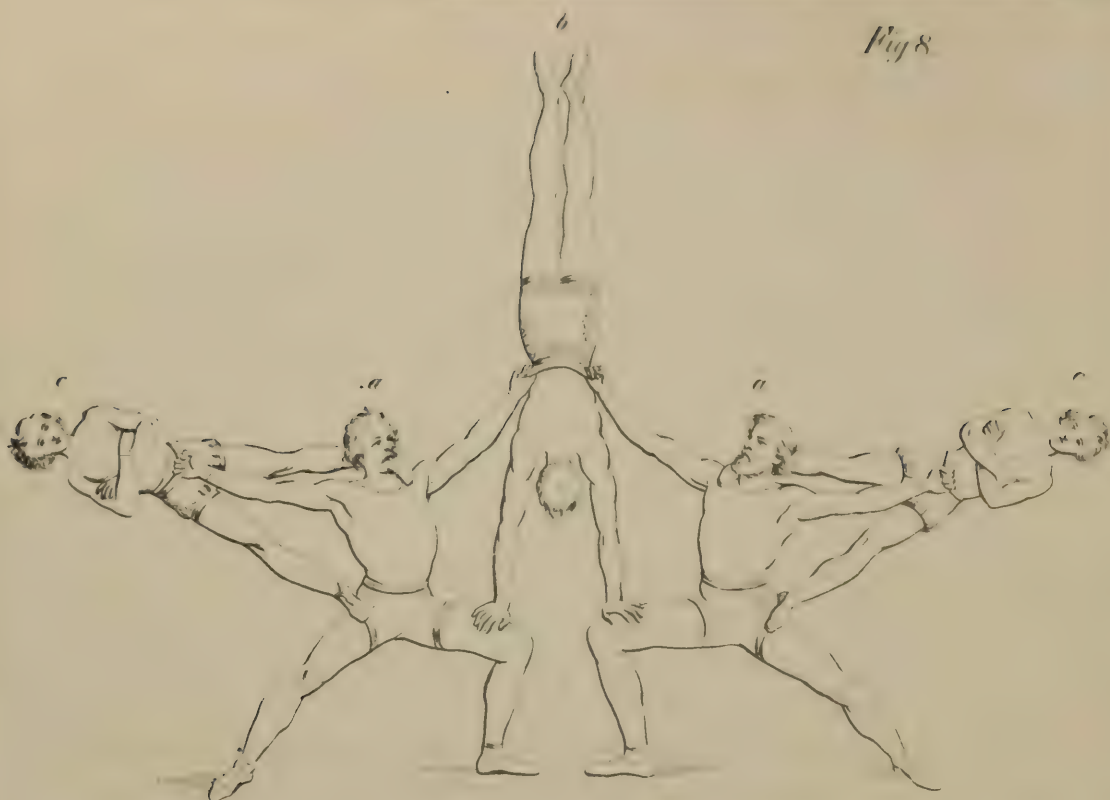


Fig 9



FIG. 8.—“*Handstand with Flying Ends.*” *a* takes position, *b* jumps up next, then *c*. The gymnasts designated by *c* should not weigh over one hundred and twenty pounds. (*Handstand mit fliegenden Ecken.*)

FIG. 9.—“*The Flying Pyramid.*” Distinctly enough shown in the plate. (*Fliegende-Pyramide.*)

[PL. 49.]

FIG. 10. — "*The Table Pyramid.*" This pyramid, if properly constructed, is one of the neatest in the list. An ordinary strong table should be used in the center, and solid stools or kegs of half the height are placed one on each side of it. Then the pupils for the first story take their positions, and at the command "Second Story, Mount," *a* and *b* jump on the table, from thence on the shoulders of the men standing on the stools, then turn toward each other and join their arms together as appears in the plate. The little boy climbs up next and raises his legs, so that he stands on his head and hands. *This* last, however, should not be attempted unless the performer can do it with perfect ease and confidence, as both the latter qualities and some degree of skill are required for its safe performance. It is dangerous in any case and every precaution should be taken against accident. (*Tisch-Pyramide.*)

[Pl. 50.]

Fig 19

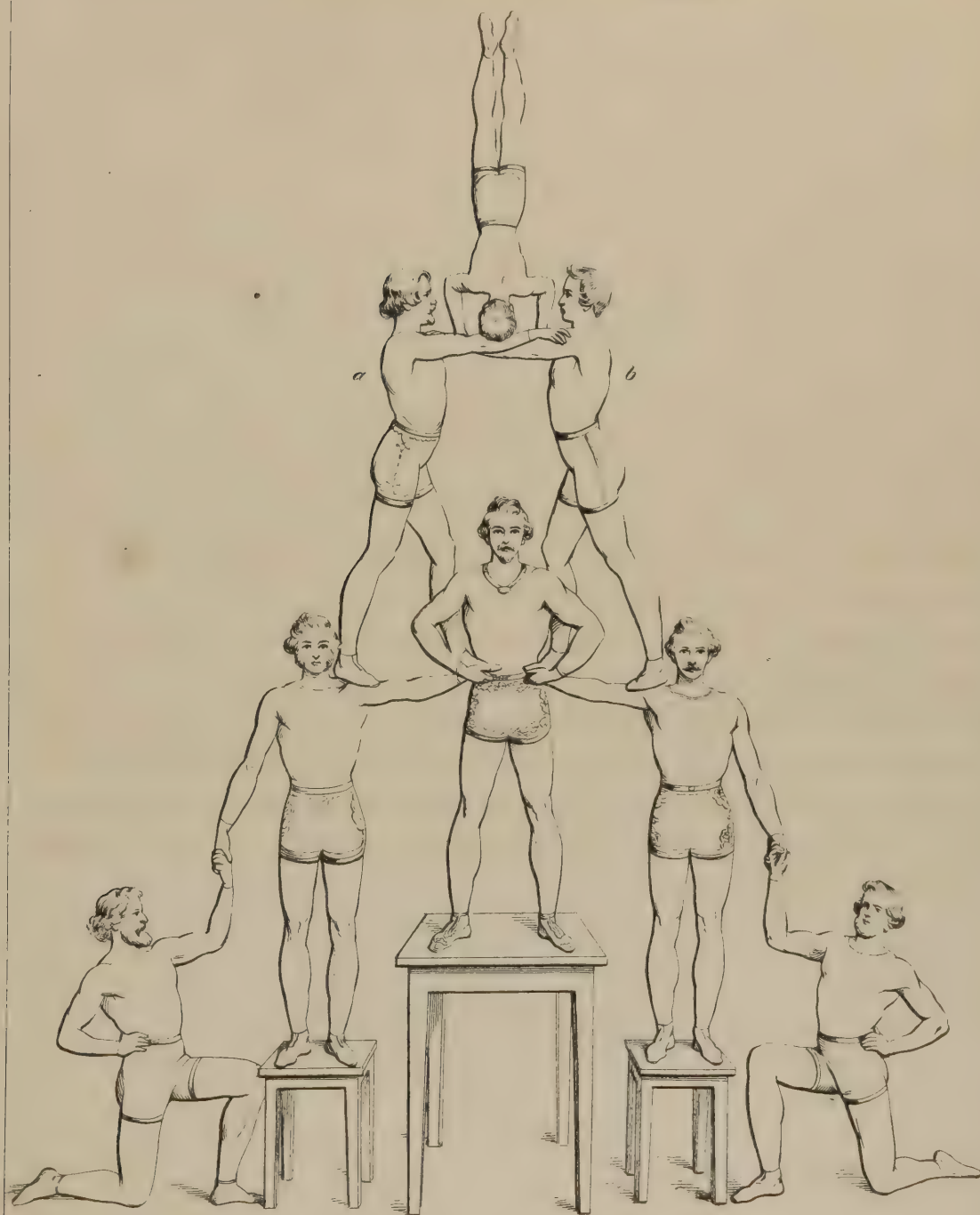


Fig 11

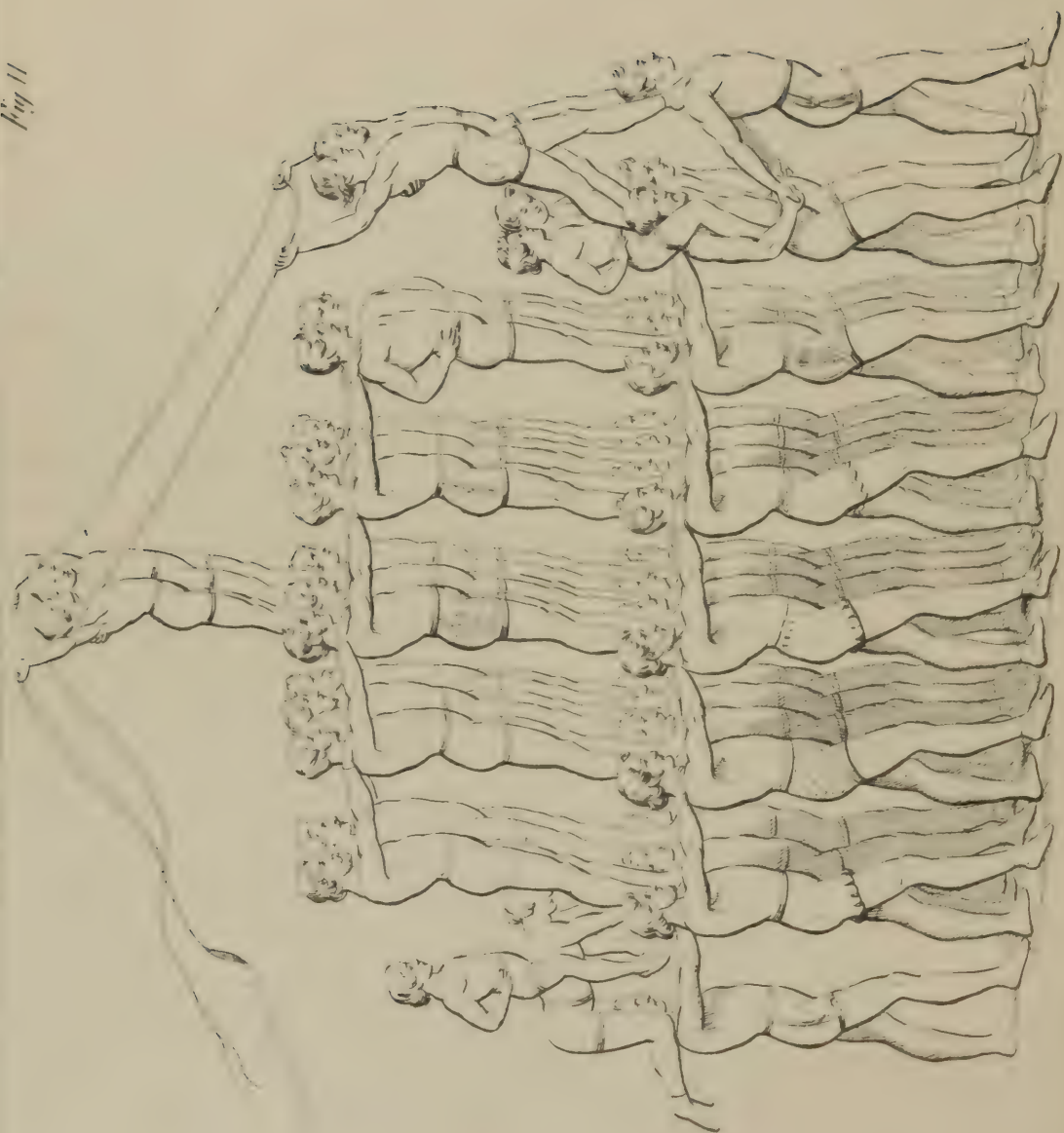


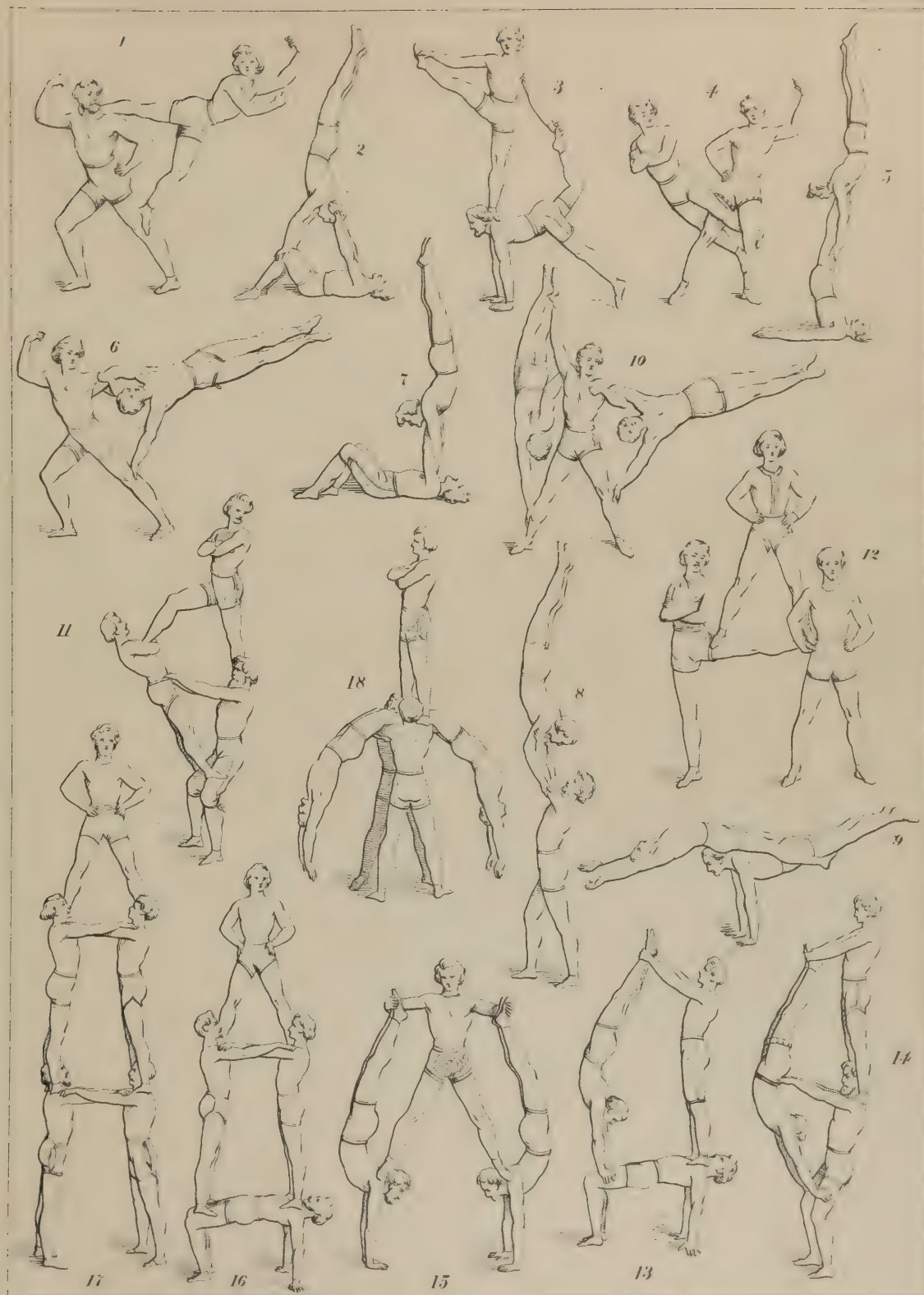
FIG. 11.—“*The Triumph Walk.*” This can be constructed with a smaller number of gymnasts by leaving off sections. This pyramid requires a great deal of care on the part of the leader in dividing the pupils. When those forming the first story are arranged in their proper position the second story will mount on the outside, the two top boys should be lifted up afterward by others not taking part in the pyramid. When the whole pyramid is properly arranged the leader commands: “Ready,” then “Mark Time,” and then “Forward, March;” the steps should be short, firm, and regular. In dismounting, the first story remains in position until all the upper stories have reached the ground safely. (*Triumph-Zug.*)

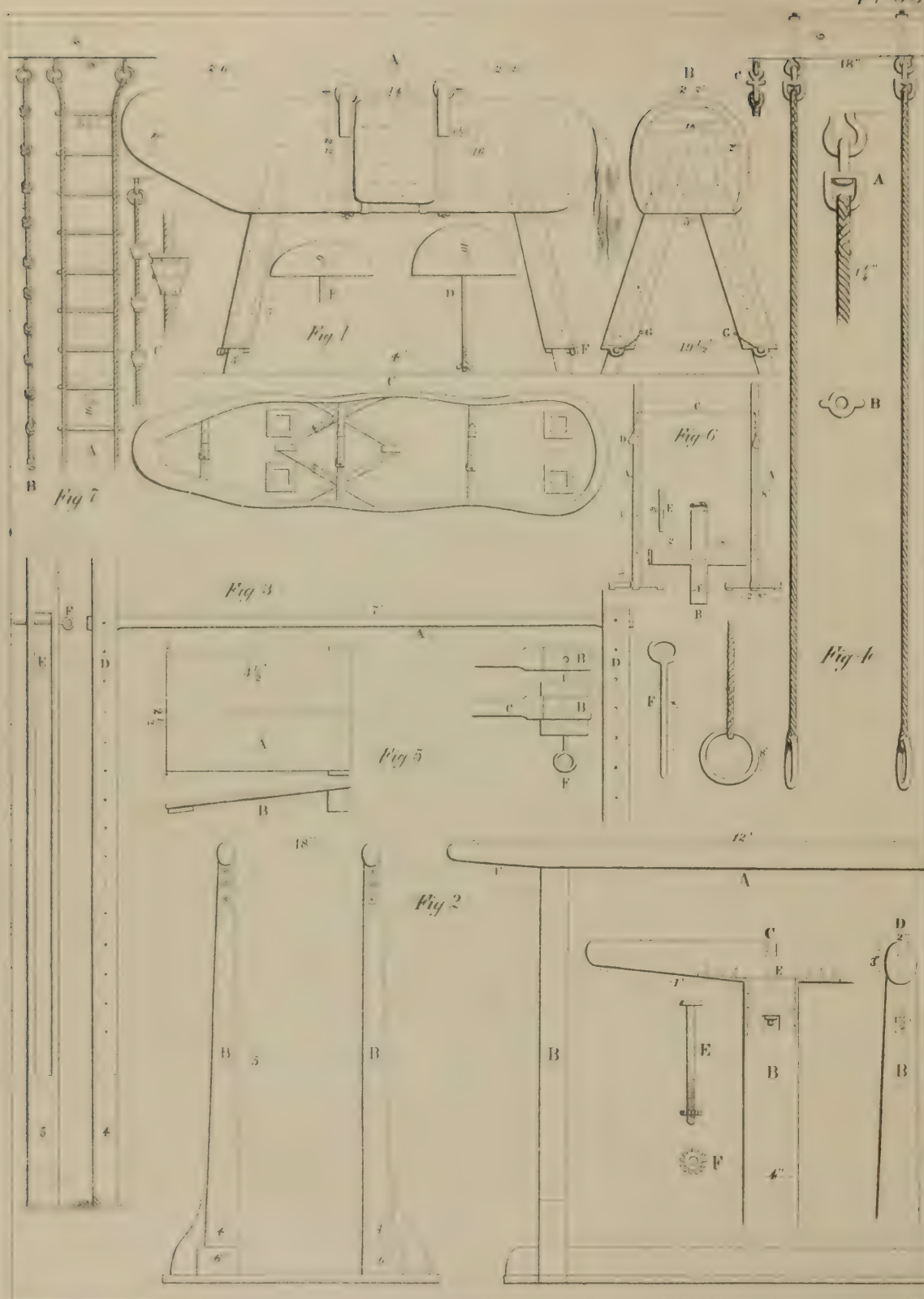
[Pl. 51.]

A c r o b a t s .

This plate does not need any explanation, the drawings show plainly the meaning of the exercises. Only experienced gymnasts should practice them.

[Pl. 52.]





EXPLANATION OF THE APPARATUS.

NOTE.—All apparatus for Gymnastic Exercises should be well and strongly made, not only that it may last as it should for a number of years, but to insure the safety of the gymnasts.

FIG. 1.—“*The Movable Vaulting Horse.*” The horse consists of a great wooden box, made of two-inch plank, mounted on and firmly fastened to four legs. *A*, side view; *B*, rear view. The legs are five-inch square boxes, in which a three-inch scantling with holes in it, slides up and down, to elevate or lower the horse if necessary. It is fastened by an iron pin (*F*) which is attached by a chain or string to the outside box (*G*) that it may not get lost. The length of the horse varies from five and a half feet to six and a half, and is covered with leather, fastened with straps below, (*C*) and well stuffed with wool or horse-hair. The pommels (*D* and *E*) are made of hickory or ash; *D* is the high pommel, it projects four inches above the horse, and is fastened to it by an iron rod which goes entirely through. In exercises where the pommels are not required they can be taken out and the lower ones (*E*) put in; these do not project above the horse at all, but only serve to cover the holes. There is another kind of horse the construction of which is not so expensive and which is stronger and better adapted for out-door use. It is cylindrical, made of wood, and covered with leather, mounted on two strong five-inch posts firmly fastened in the ground; the ends should be charred to prevent rot. The height from the ground to the top of the saddle should be three feet six inches to four feet. (*Das Schwingpferd.*)

FIG. 2.—“*The Movable Parallel Bars.*” Are two pieces of hickory wood, from eight to twelve feet in length (*A*), polished, and the edges and ends rounded; the rest of the wood-work can be made from ash or oak. They should be strongly and neatly made. *E* is the pin to fasten the bar to the upright post (*B*); after the pin is in, a little piece of wood (*C*) should be glued in above it so that the surface of the bars may be perfectly smooth and even. The only difference between these and the “Fixed Bars” is that the former are erected upon a movable platform, while the upright posts of the latter are driven into the ground or fastened to the floor. (*Der Barren.*)

FIG. 3.—“*The Horizontal Bar.*” The bar (*A*) should be made of straight hickory or lance-wood from one and a half to two inches in diameter. It must be free from knots or it will break; the surface should be smooth and the ends (*B*) covered with iron. The bar moves up and down in the slots (*E*) of the upright posts (*D*) and are fastened at any desired height by means of the iron pins (*F*) passing through the holes indicated in the plate. (*Die Reckstange.*)

FIG. 4.—“*The Rings.*” The rings should be hung at a distance from the ground, varying according to the height of those using them—seven feet is the proper altitude for a grown person of good medium size. The material should be iron or brass, covered with leather. The ropes should not be less than nine feet long. *A* is an iron which turns with the rope, thus preventing it from twisting. *B* is the top view, *C* the side view. (*Die Ringschaukel.*)

FIG. 5.—“*The Leaping Board.*” Should be made of one-inch boards of a strong, unelastic wood. It is only used by beginners to give the right start in leaping or vaulting over an obstacle. (*Das Sprungbrett.*)

FIG. 6.—“*The Leaping Posts.*” *A* should be made of tough wood, and the holes placed from two to three inches apart and marked by figures

commencing at the bottom. The feet (*B*) upon which they stand should be very heavy for obvious reasons. The cross rope (*C*) is usually nine feet long and half an inch in diameter. The leather bags (*D*) may be filled with sand or any heavy but soft substance. *E* is the pin. (*Der Springel.*)

FIG. 7.—*A* is the “Rope Ladder; *B* the “Knotted Rope,” and *C* “Amoros’ Ladder.” (*Strickleiter und Klettertaue.*)

[PL. 53.]

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